

ICSB3-G1J□HB1□

ICSPB3-G1J□HB1□

High-Precision Specification

±10µm Standard

±5µm High Precision

Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Mg (200W)
Z: Sm (60W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm; 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 50: 500mm; 70: 700mm (Every 100mm)

Z-axis Stroke/Option: 10: 100mm; 60: 600mm (Every 50mm)

Applicable Controllers: T2: SCON; XSEL; XSEL-P/Q; XSEL-RA/SA*

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

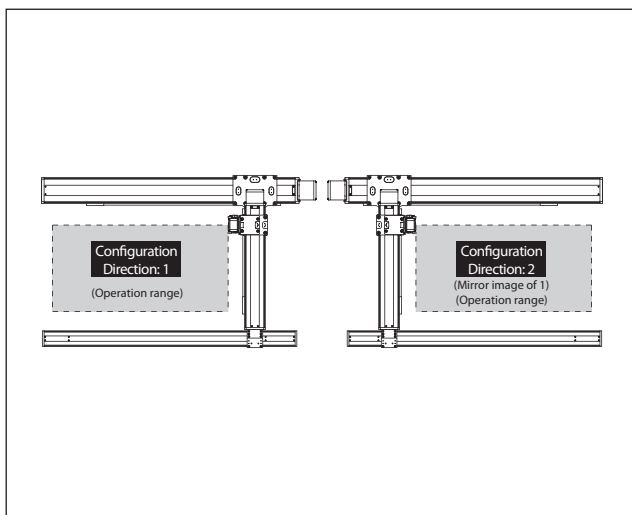
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G1J1HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J1HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J1HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-G1J2HB1H-①-②③④⑤⑥⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J2HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J2HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑩⑥-⑦-T2-⑧⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

16: For Z-axis High Speed type

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm ? 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 60: 600mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ G1J□HB1H

Z-axis stroke	Y-axis stroke
	500~700
100	3.5
150	
200	
250	
300	
350	
400	
450	
500	
550	
600	

■ G1J□HB1L

Z-axis stroke	Y-axis stroke
	500~700
100	14.0
150	
200	
250	
300	
350	
400	
450	
500	
550	
600	

■ G1J□HB1M

Z-axis stroke	Y-axis stroke
	500~700
100	7.0
150	
200	
250	
300	
350	
400	
450	
500	
550	
600	

Maximum Speed by Stroke (mm/s) (Note 4)

■ G1J□HB1H

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	—	960	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ G1J□HB1M

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	—	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ G1J□HB1L

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	—	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

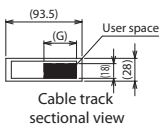
ICSB3 [ICSPB3]-G1J□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.

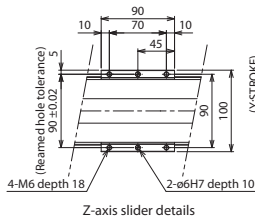


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

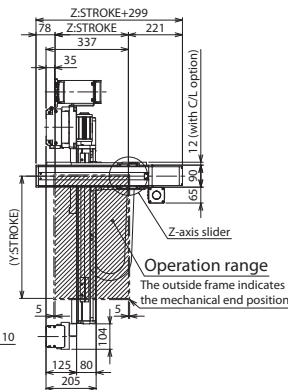


Cable track sectional view

Cable track location	G
First axis	40
Second axis	60

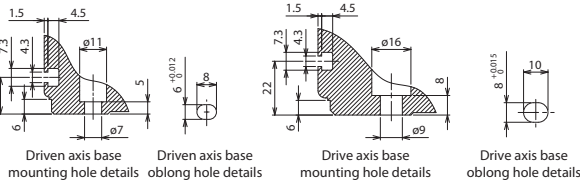
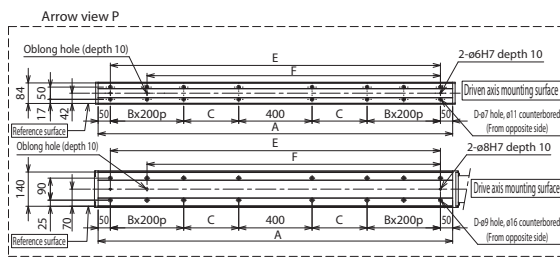
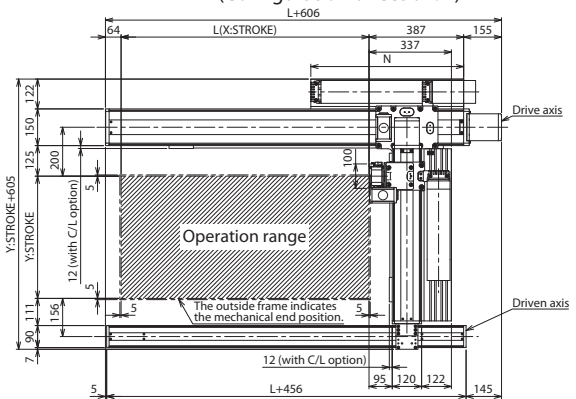


Z-axis slider details

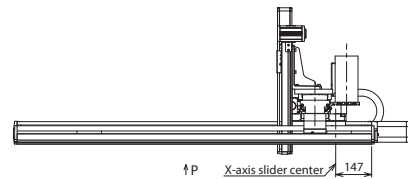


Operation range
The outside frame indicates the mechanical end position.

(Configuration direction: 1)



Driven axis base mounting hole details, Driven axis base oblong hole details, Drive axis base mounting hole details, Drive axis base oblong hole details



↑P X-axis slider center 147

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HB2□

ICSPB3-G1J□HB2□

High-Precision Specification



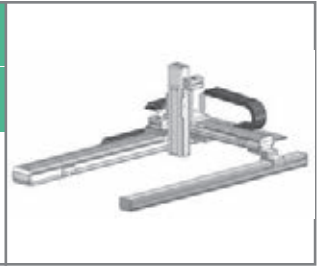
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm (Every 50mm) 60: 600mm	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

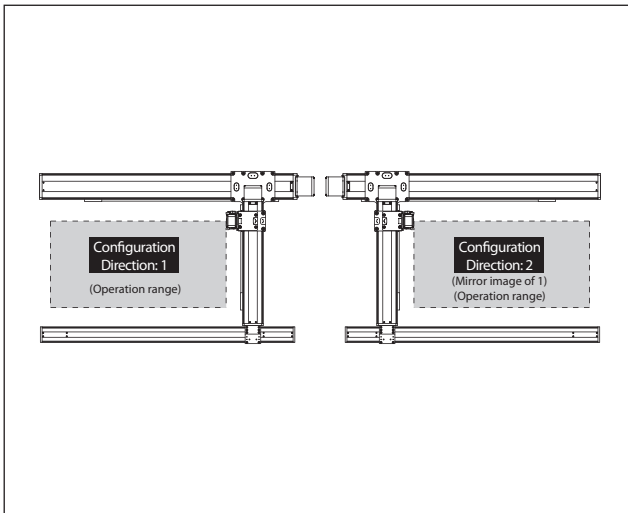
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G1J1HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G1J1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G1J1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-G1J2HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G1J2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G1J2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[3]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[3]-100-[10]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ G1J□HB2H

Z-axis stroke	Y-axis stroke 500~700	
	100	5.0
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■ G1J□HB2L

Z-axis stroke	Y-axis stroke 500~700	
	100	20.0
150		
200		
250		
300		
350		
400		
450		19.5
500		19.0
550		18.5
600		18.0

■ G1J□HB2M

Z-axis stroke	Y-axis stroke 500~700	
	100	10.0
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

Maximum Speed by Stroke (mm/s) (Note 4)

■ G1J□HB2H

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ G1J□HB2M

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ G1J□HB2L

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

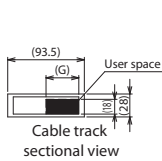
ICSB3 [ICSPB3]-G1J□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.

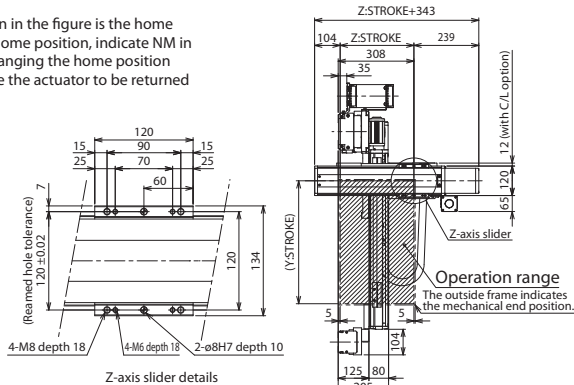


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

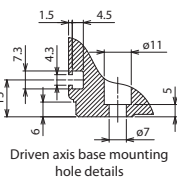
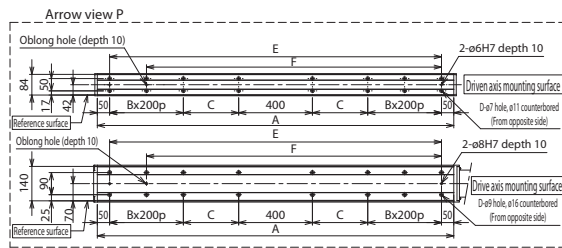


Cable track sectional view

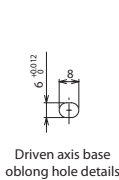
Cable track location	G
First axis	40
Second axis	60



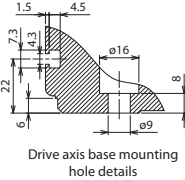
Z-axis slider details



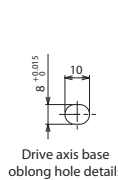
Driven axis base mounting hole details



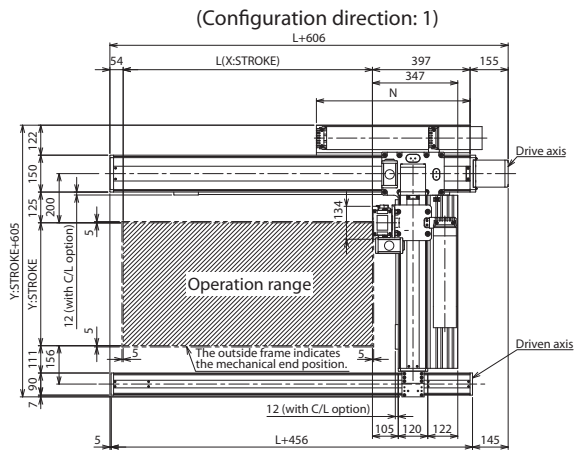
Driven axis base oblong hole details



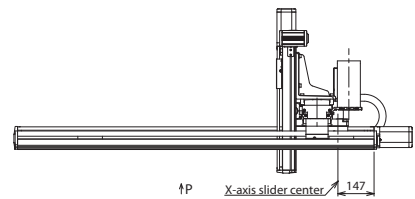
Drive axis base mounting hole details



Drive axis base oblong hole details



(Configuration direction: 1)



X-axis slider center

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HB3□

ICSPB3-G1J□HB3□

High-Precision Specification

±10μm
Standard

±5μm
High-Precision

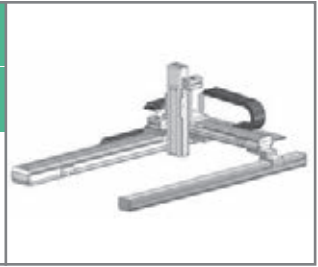
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lq (400W)
Y: Mg (200W)
Z: Md (200W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification, ICSPB3: High precision 3-axis specification
 Type: Refer to Model Specification table below
 Encoder Type: WA: Battery-less Absolute
 X-axis Stroke/Option: 100: 1000mm, 250: 2500mm (Every 100mm)
 Y-axis Stroke/Option: 50: 500mm, 70: 700mm (Every 100mm)
 Z-axis Stroke/Option: 10: 100mm, 60: 600mm (Every 50mm)
 Applicable Controllers: T2: SCON, SSEL, XSEL-P/Q, XSEL-RA/SA*
 Cable Length: 3L: 3m, 5L: 5m, □L: Specified length
 Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

Model Specification

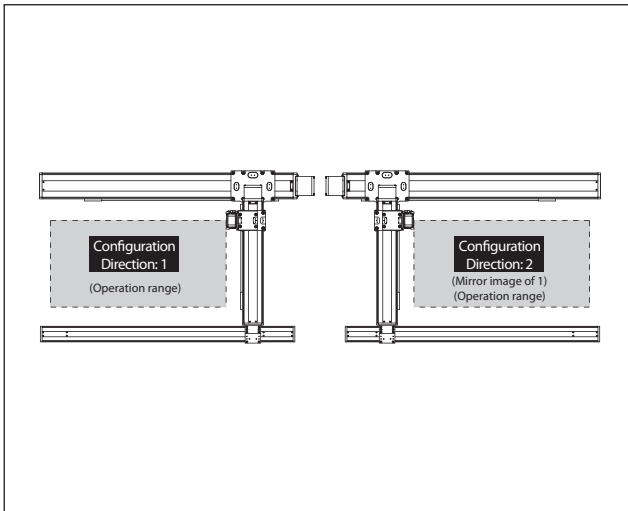
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G1J1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	H	ICSB3[ICSPB3]-G1J2HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSB3[ICSPB3]-G1J2HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑩-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names. Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑨ in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G1J□HB3H

		Y-axis stroke 500~700
Z-axis stroke	100	10.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
	500	
	600	

G1J□HB3M

		Y-axis stroke 500~700
Z-axis stroke	100	20.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
	500	
	600	

Maximum Speed by Stroke (mm/s) (Note 4)

G1J□HB3H

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

G1J□HB3M

	100~450	500~600	700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

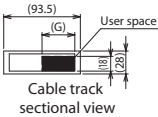
ICSB3 [ICSPB3]-G1J□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.

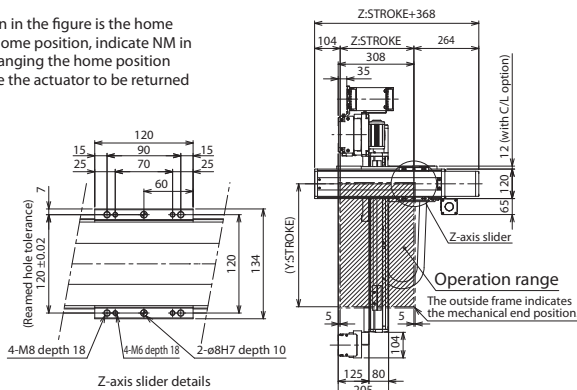


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

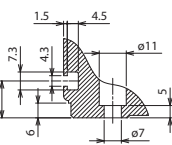
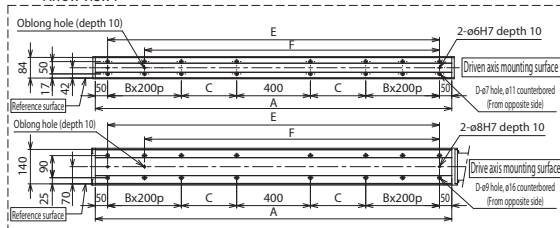


Cable track sectional view

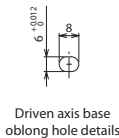
Cable track location	G
First axis	40
Second axis	60



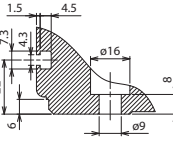
Arrow view P



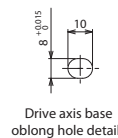
Driven axis base mounting hole details



Driven axis base oblong hole details

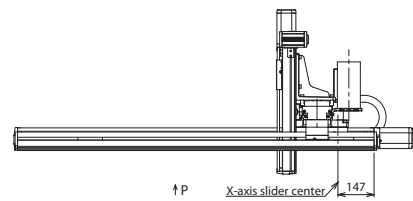
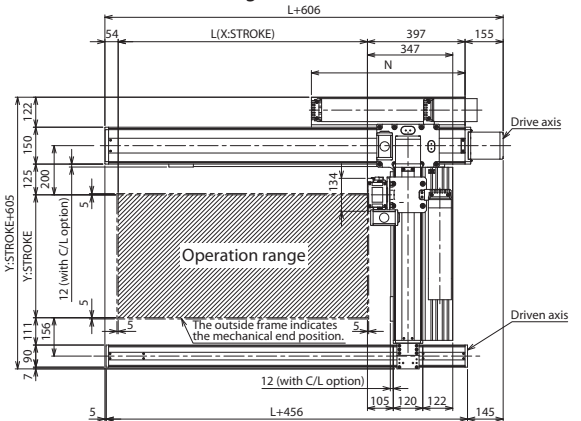


Drive axis base mounting hole details



Drive axis base oblong hole details

(Configuration direction: 1)



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HB1□

ICSPB3-G2J□HB1□

High-Precision Specification



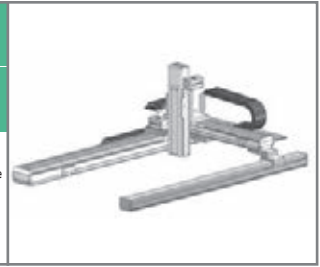
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Sm (60W)



Model Specification Items

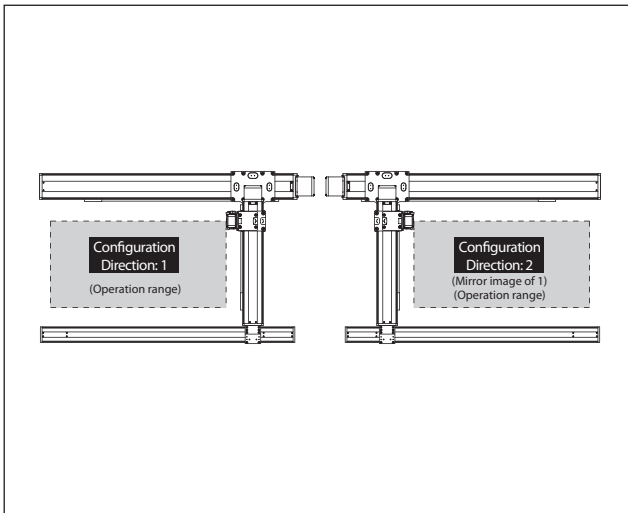
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 50mm)	10: 100mm 60: 600mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G2J1HB1H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-G2J1HB1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-G2J1HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
2	H	ICSB3[ICSPB3]-G2J2HB1H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-G2J2HB1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-G2J2HB1L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXMX-①-200-20-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥⑦-T2-⑧⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑤ in the above model names.
16: For Z-axis High Speed type
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ⑧ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/16mm (H), 8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G2J□HB1H		■G2J□HB1M		■G2J□HB1L	
Y-axis stroke 800~1,200		Y-axis stroke 800~1,200		Y-axis stroke 800~1,200	
Z-axis stroke	100	3.5	7.0	14.0	14.0
	150				
	200				
	250				
	300				
	350				
	400				
	450				
	500				
	550				
	600				

Maximum Speed by Stroke (mm/s) (Note 4)

■G2J□HB1H		Maximum Speed by Stroke (mm/s) (Note 4)															
		100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	440	370	340	340
Y-axis	—	1200	1100	—													
Z-axis	960	—															

■G2J□HB1M		Maximum Speed by Stroke (mm/s) (Note 4)															
		100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	440	370	340	340
Y-axis	—	1200	1100	—													
Z-axis	480	—															

■G2J□HB1L		Maximum Speed by Stroke (mm/s) (Note 4)															
		100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	440	370	340	340
Y-axis	—	1200	1100	—													
Z-axis	240	—															

ICSB3 [ICSPB3]-G2J□HB1□-CT-CT (Cable track specification)

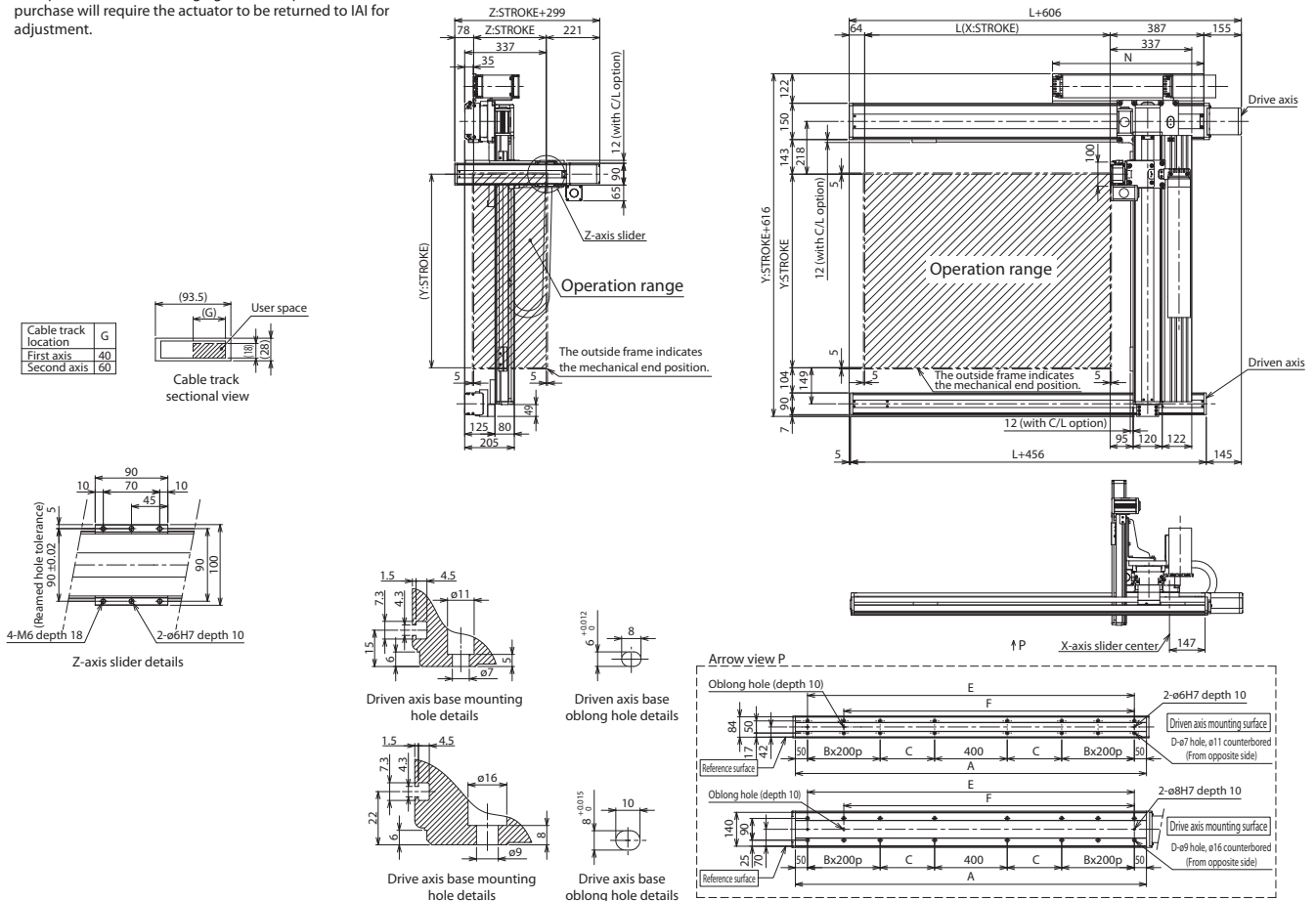
Dimensions

CAD drawings can be downloaded from our website.



(Configuration direction: 1)

* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HB2□

ICSPB3-G2J□HB2□

High-Precision Specification

±10μm Standard

±5μm High Precision


Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items: **G2J□HB2□** **WA** **T2**

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm; 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 80: 800mm; 120: 1200mm (Every 100mm)

Z-axis Stroke/Option: 10: 100mm; 60: 600mm (Every 50mm)

Applicable Controllers: T2: SCON; SSEL; XSEL-P/Q; XSEL-RA/SA* (*Coming soon)

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

Y-axis-Z-axis Cable Management: Refer to Explanation of Model Designations below

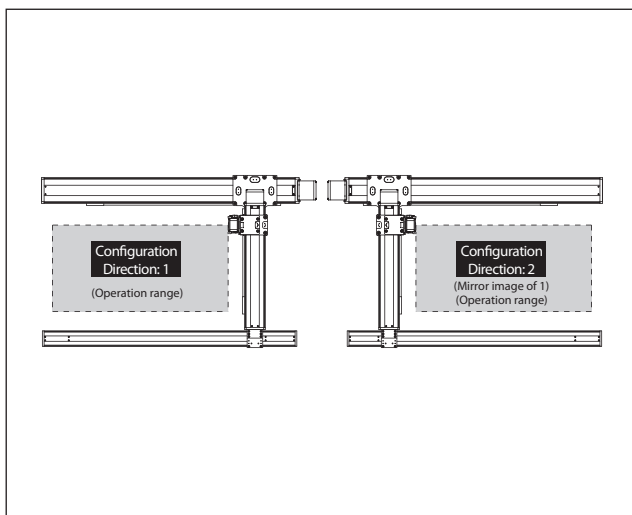
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G2J1HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G2J1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-G2J2HB2H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-G2J2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXMX-[1]-200-20-[4]-T2-[1]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-100-[6]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names. Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [8] in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with [9] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm ? 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm ? 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 60: 600mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
* Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ G2J□HB2H

Z-axis stroke	Y-axis stroke	
	800~1,200	1200
100	5.0	
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■ G2J□HB2M

Z-axis stroke	Y-axis stroke	
	800~1,200	1200
100	10.0	
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■ G2J□HB2L

Z-axis stroke	Y-axis stroke	
	800~1100	1200
100	20.0	20.0
150		20.0
200		20.0
250		19.5
300		18.9
350		18.2
400		17.6
450		17.0
500		16.4
550		15.7
600		15.1

Maximum Speed by Stroke (mm/s) (Note 4)

■ G2J□HB2H

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1100	1050	1000	950	900	850	800	750	700	650	600	550	500
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ G2J□HB2M

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1100	1050	1000	950	900	850	800	750	700	650	600	550	500
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■ G2J□HB2L

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1100	1050	1000	950	900	850	800	750	700	650	600	550	500
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G2J□HB2-CT-CT□ (Cable track specification)

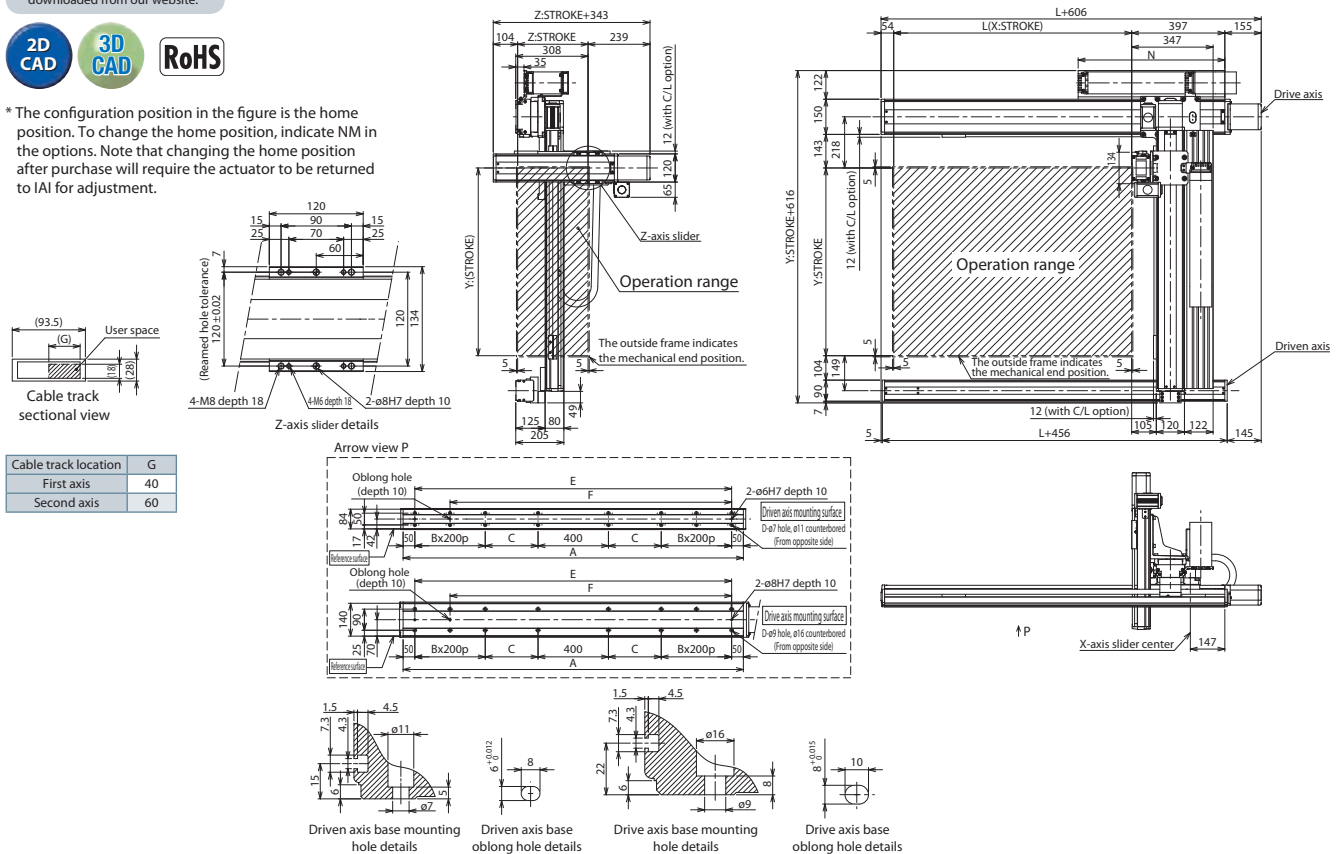
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HB3□

ICSPB3-G2J□HB3□

High-Precision Specification

±10μm
Standard

±5μm
High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYG+ZB (Y Horiz. Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 50mm)	10: 100mm 60: 600mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

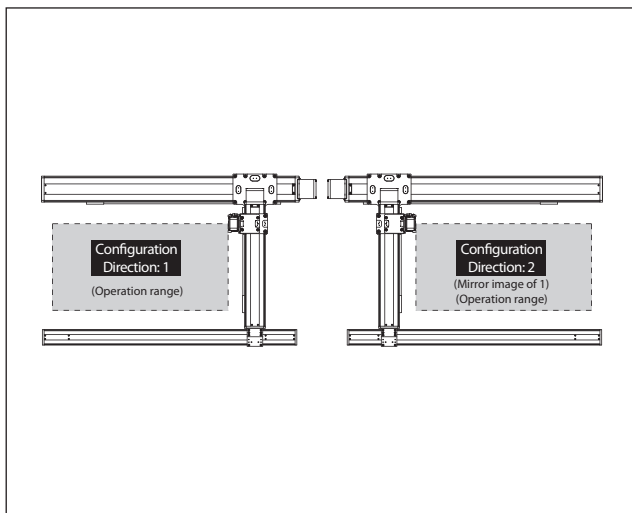
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-G2J1HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J1HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-G2J2HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-G2J2HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-[1]-400-20-[2]-T2-[11]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXMX-[1]-200-20-[4]-T2-[11]-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[6]-[6]-T2-[11]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

* Cable exit direction is specified with [13] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 60: 600mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G2J□HB3H

Z-axis stroke	Y-axis stroke	
	800~1,200	
100	10.0	
150		
200		
250		
300		
350		
400		
450		
500		
550		
600		

■G2J□HB3M

Z-axis stroke	Y-axis stroke			
	800~1000	1100	1200	
100	20.0	20.0	20.0	
150		20.0	20.0	
200		20.0	19.6	
250		20.0	18.9	
300		20.0	18.3	
350		19.7	17.7	
400		19.1	17.1	
450		19.5	18.4	16.4
500		19.0	17.8	15.8
550		18.5	17.1	15.1
600		18.0	16.5	14.5

Maximum Speed by Stroke (mm/s) (Note 4)

■G2J□HB3H

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	—
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HB3M

	100~600	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	—
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G2J□HB3□-CT-CT (Cable track specification)

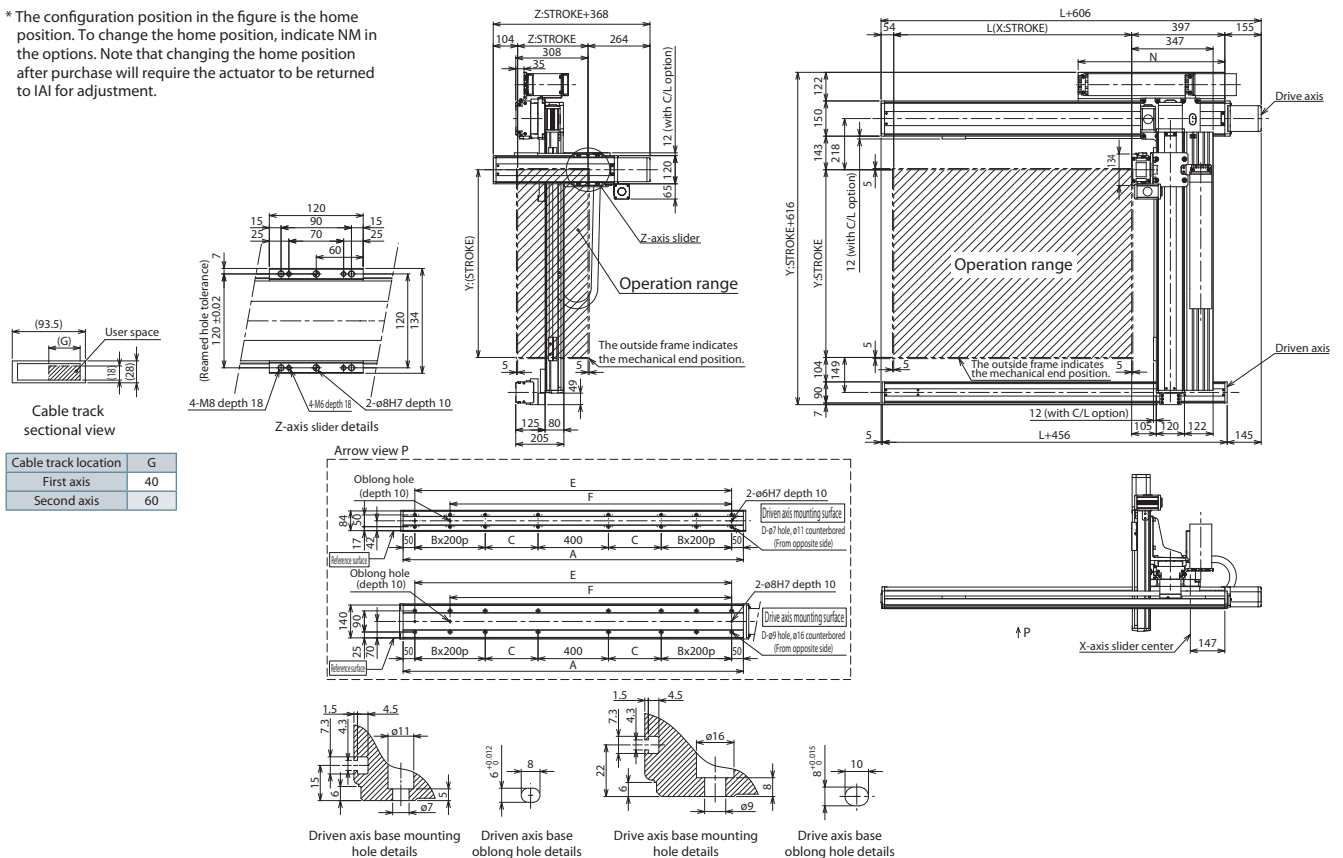
Dimensions

CAD drawings can be downloaded from our website.



(Configuration direction: 1)

* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA1 for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HS1□

ICSPB3-G1J□HS1□

High-Precision Specification



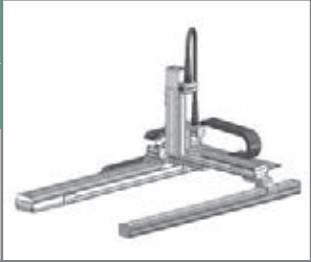
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X:Lg (400W)
Y:Md (200W)
Z:Sm (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

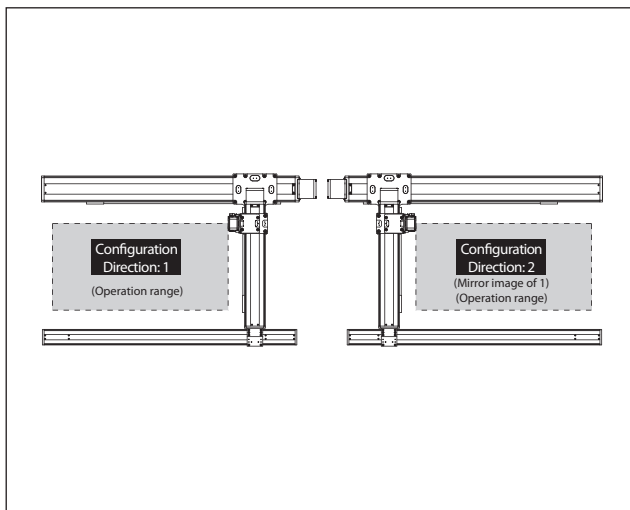
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G1J1HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J1HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-G1J2HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G1J2HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑦-T2-⑧-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑧ in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ⑨ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G1J□HS1M

Z-axis stroke	Y-axis stroke	
	500~700	
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■G1J□HS1L

Z-axis stroke	Y-axis stroke	
	500~700	
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■G1J□HS1M

	100~400	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G1J□HS1L

	100~400	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G1J□HS1□-CT-CTSC (Cable track - Cable track + Self-standing cable specification)

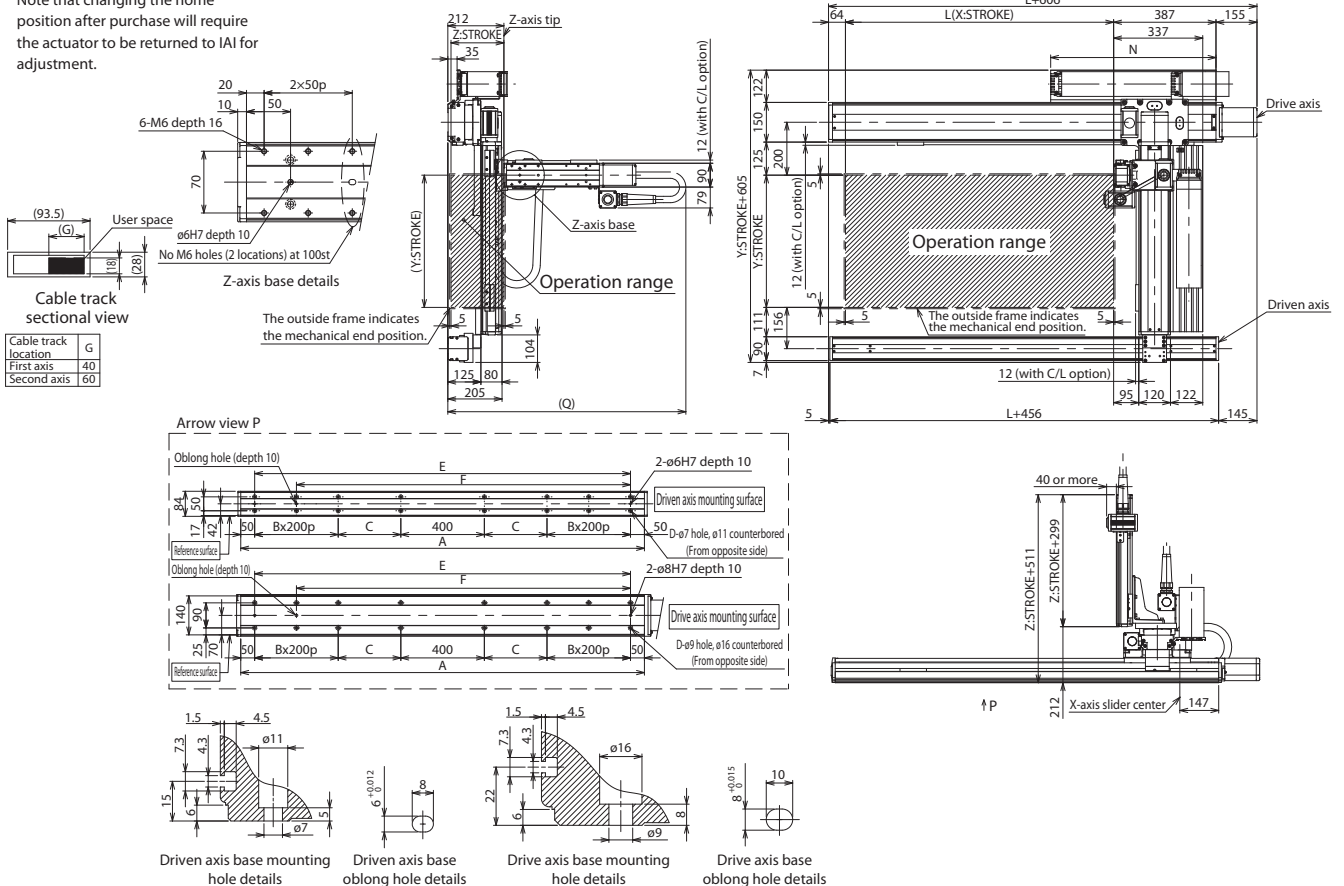
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HS2L

ICSPB3-G1J□HS2L High-Precision Specification



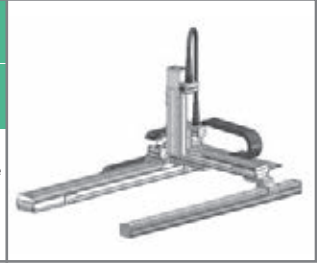
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

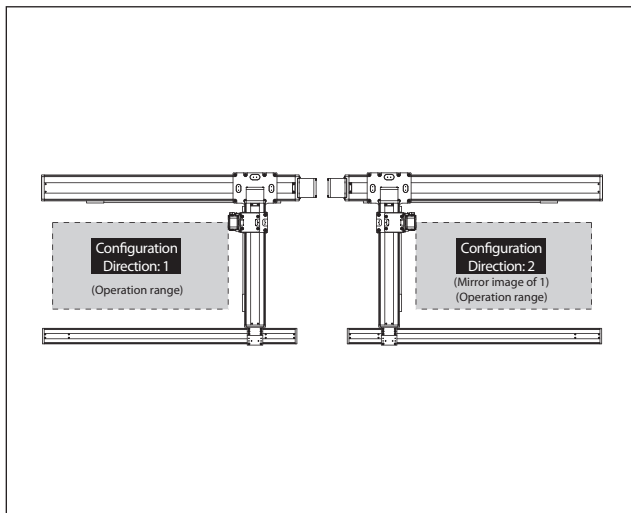
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	Refer to Options table below. 50: 500mm (Every 100mm)	Refer to Options table below. 10: 100mm (Every 50mm) 50: 500mm (Every 100mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	L	ICSB3[ICSPB3]-G1J1HS2L- 1 - 2 - 3 - 4 - 5 - 6 - 7 - T2 - 8 - 9
2	L	ICSB3[ICSPB3]-G1J2HS2L- 1 - 2 - 3 - 4 - 5 - 6 - 7 - T2 - 8 - 9

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX- 1 -400-20- 2 - T2 - 10 - 3	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0- 2	—
Y-axis	ISB[ISPB]-MXM- 1 -200-20- 4 - T2 - 10 - 5	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- 1 -100-5- 6 - T2 - 10 - 7	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm ? : 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm ? : 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G1J□HS2L

Z-axis stroke	Y-axis stroke 500~700	
	100	150
100	14.8	
150	14.2	
200	13.6	
250	12.9	
300	12.3	
350	11.6	
400	11.0	
450	10.4	
500	9.8	

Maximum Speed by Stroke (mm/s) (Note 4)

G1J□HS2L

	100~500	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

ICSB3 [ICSPB3]-G1J□HS2L-CT-CTSC (Cable track - Cable track + Self-standing cable specification)

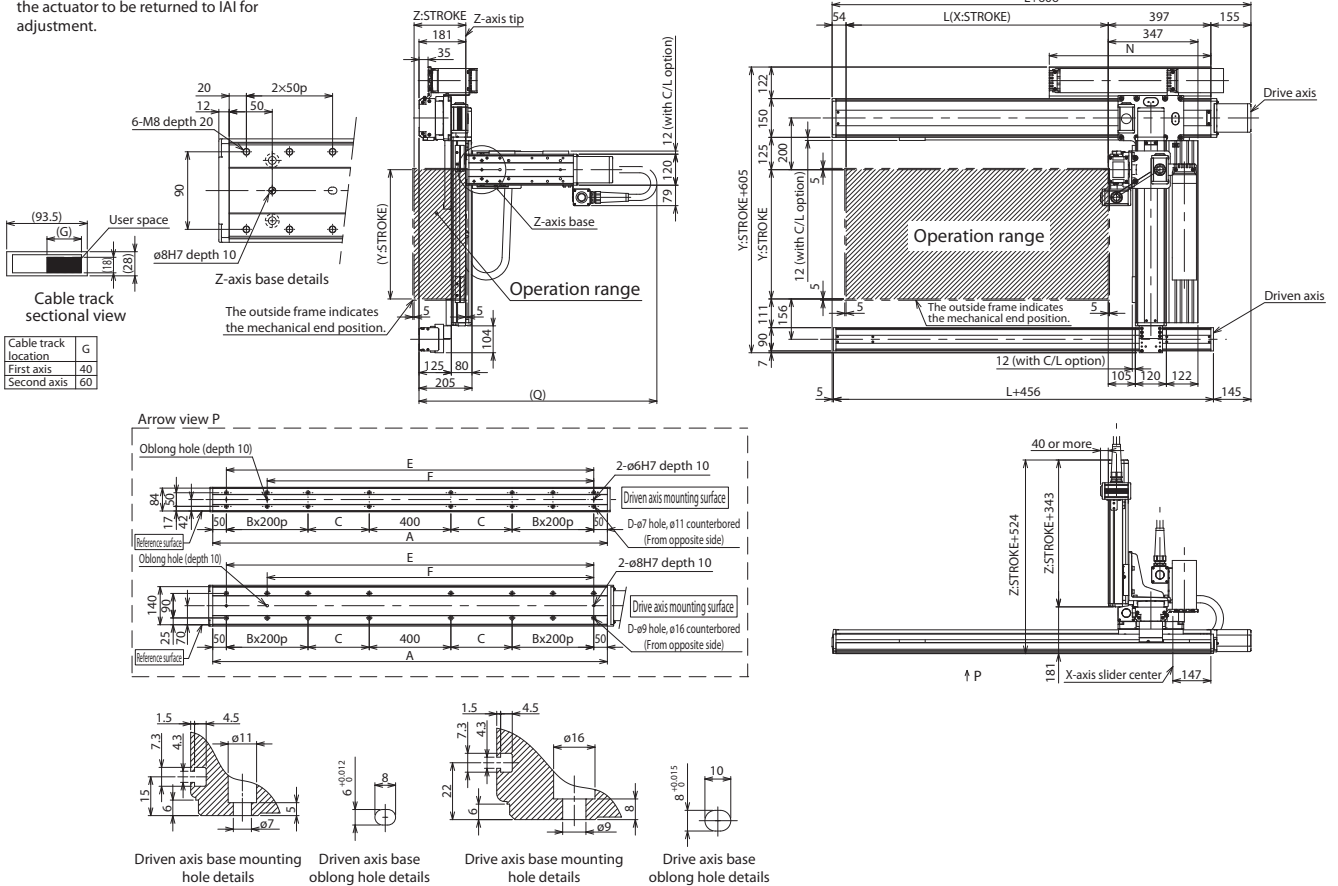
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G1J□HS3M

ICSPB3-G1J□HS3M High-Precision Specification



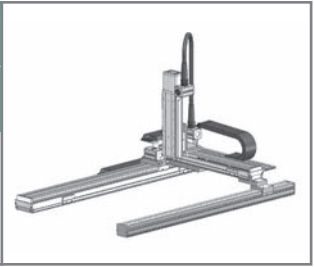
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	50: 500mm 70: 700mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

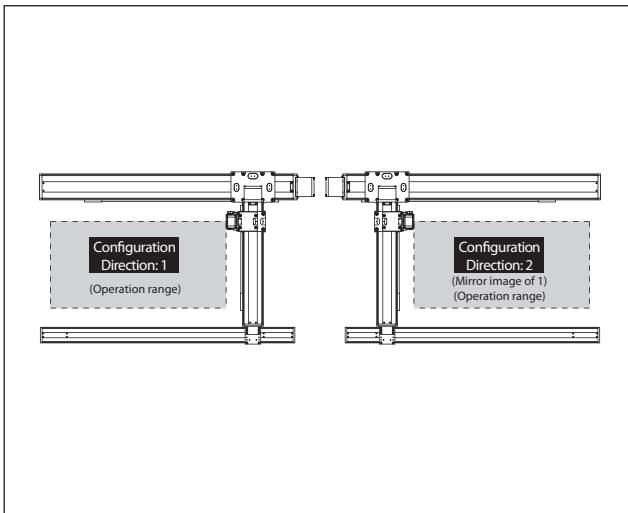
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G1J1HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-G1J2HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXJWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑨ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	50: 500mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G1J□HS3M

Z-axis stroke	Y-axis stroke	
	500~700	
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	
450	9.8	
500	9.2	

Maximum Speed by Stroke (mm/s) (Note 4)

■G1J□HS3M

	100~500	500~700	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—		1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—		1200	—												
Z-axis	600		—													

ICSB3 [ICSPB3]-G1J□HS3M-CT-CTSC (Cable track - Cable track + Self-standing cable specification)

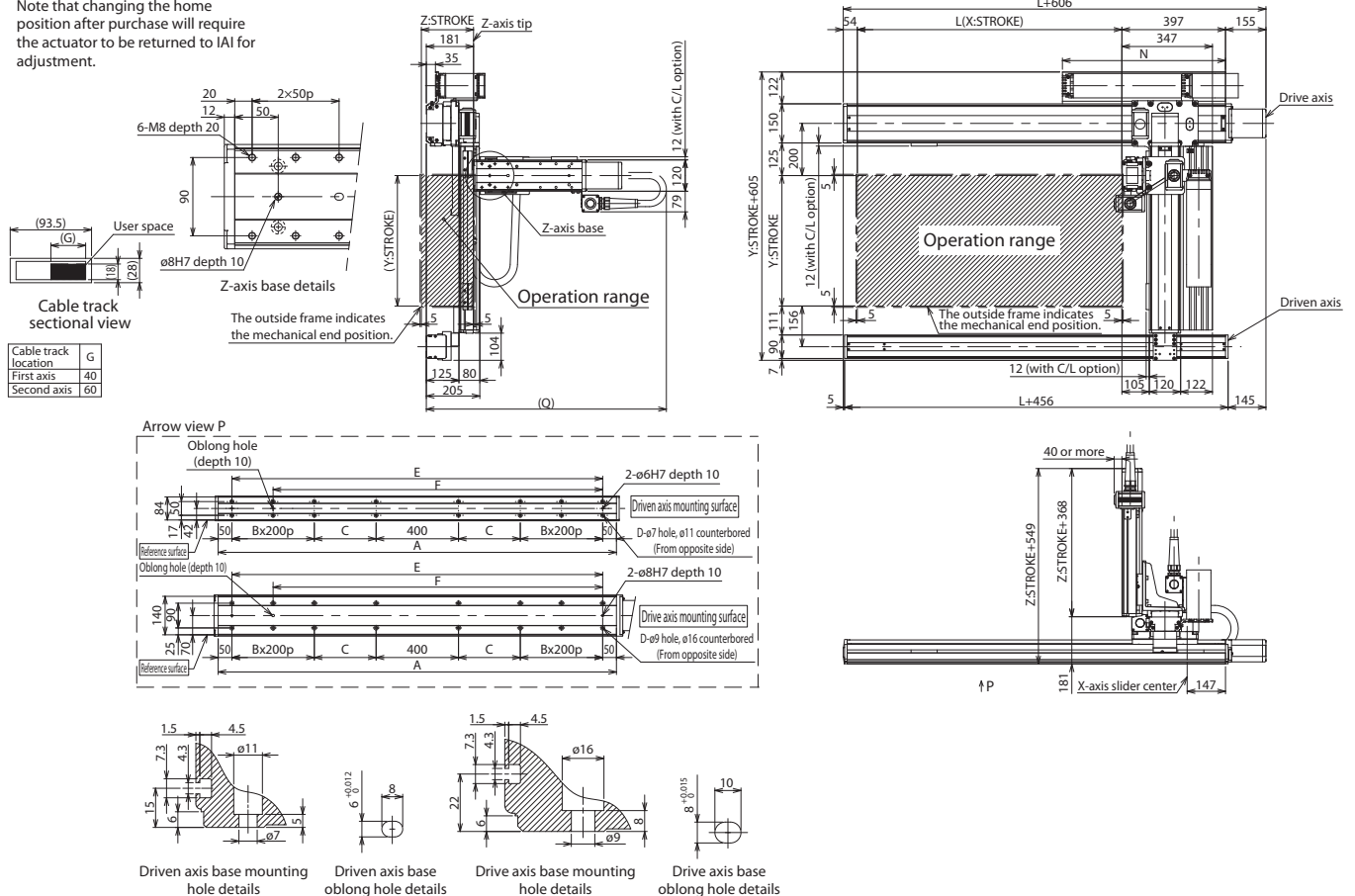
Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HS1□

ICSPB3-G2J□HS1□

High-Precision Specification

±10µm Standard

±5µm High Precision

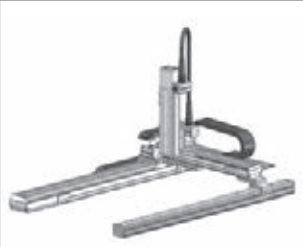
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X:Lg (400W)
Y: Md (200W)
Z: Sm (60W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification; ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 100: 1000mm; 250: 2500mm (Every 100mm)

Y-axis Stroke/Option: 80: 800mm; 120: 1200mm (Every 100mm)

Z-axis Stroke/Option: 10: 100mm; 40: 400mm (Every 50mm)

Applicable Controllers: T2: SCON; SSEL; XSEL-P/Q; XSEL-RA/SA* (*Coming soon)

Cable Length: 3L: 3m; 5L: 5m; □L: Specified length

Y-axis-Z-axis Cable Management: Refer to Explanation of Model Designations below

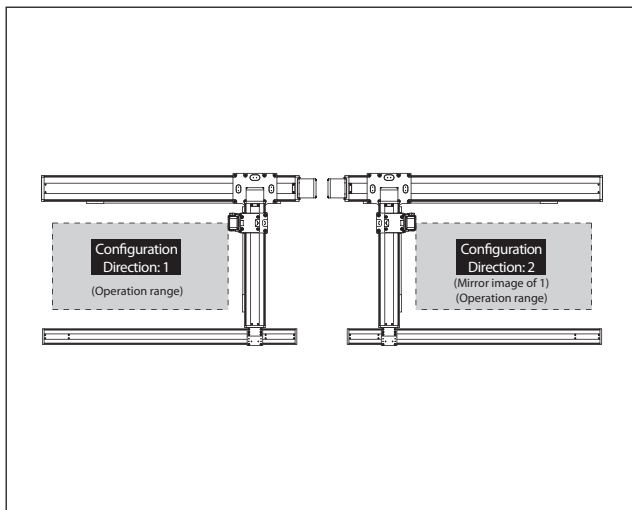
Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G2J1HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G2J1HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-G2J2HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-G2J2HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXMX-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑦-T2-⑧-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑤ in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type

* Cable exit direction is specified with ③ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm ? : 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	80: 800mm ? : 120: 1200mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■G2J□HS1M

Z-axis stroke	Y-axis stroke 800~1,200	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■G2J□HS1L

Z-axis stroke	Y-axis stroke 800~1,200	
	100	150
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■G2J□HS1M

	100~400	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

■G2J□HS1L

	100~400	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1100	1150	1000	950	830	740	650	590	490	540	490	440	370	340
Y-axis	—	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

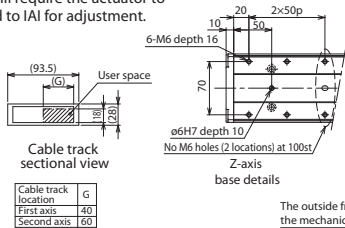
ICSB3 [ICSPB3]-G2J□HS1□-CT-CTSC (Cable track - Self-standing cable specification)

Dimensions

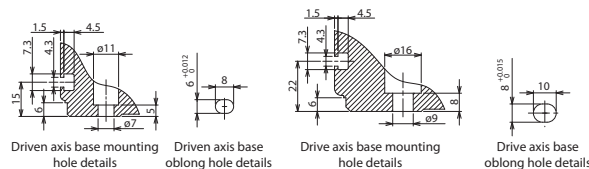
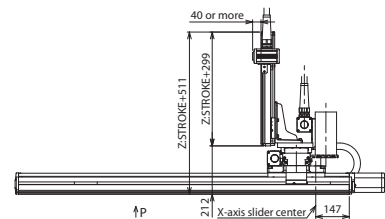
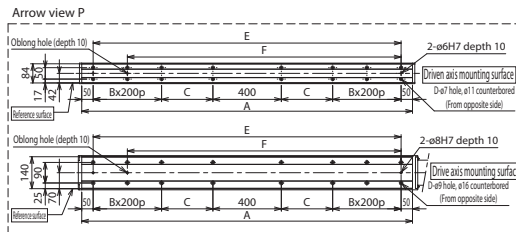
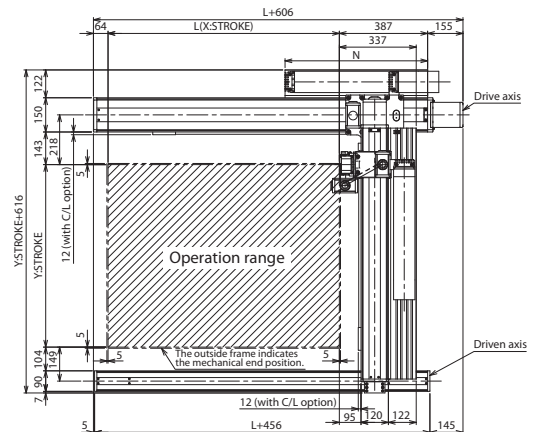
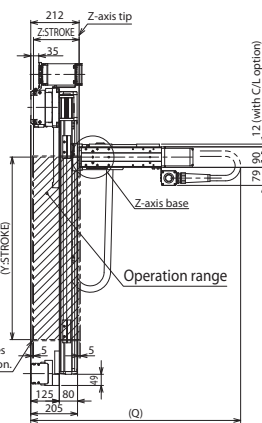
CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



(Configuration direction: 1)



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	1250
Q	900	950	1000	1050	1100	1150	1200	500	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975	1025
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HS2L

ICSPB3-G2J□HS2L High-Precision Specification

±10µm Standard

±5µm High-Precision

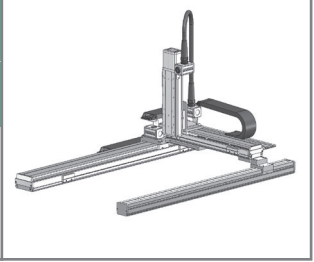
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz. Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

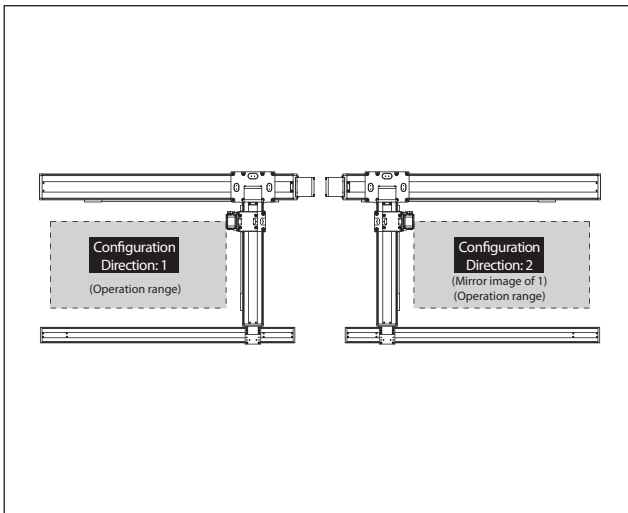
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	L	ICSB3[ICSPB3]-G2J1HS2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	L	ICSB3[ICSPB3]-G2J2HS2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX- [1] -400-20- [2] -T2- [10] - [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXMX- [1] -200-20- [4] -T2- [10] - [5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- [1] -100-5- [6] -T2- [10] - [7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

*4 Cannot be selected for High-Precision Specification. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G2J□HS2L

Z-axis stroke	Y-axis stroke 800~1,200	
	100	150
100	14.8	
150	14.2	
200	13.6	
250	12.9	
300	12.3	
350	11.6	
400	11.0	
450	10.4	
500	9.8	

Maximum Speed by Stroke (mm/s) (Note 4)

G2J□HS2L

	100~500	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

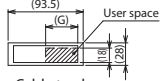
ICSB3 [ICSPB3]-G2J□HS2L-CT-CTSC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



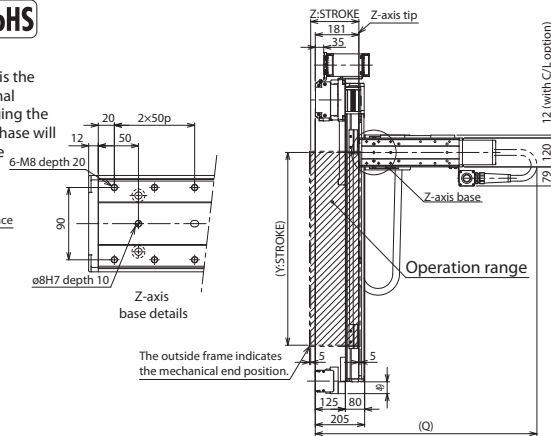
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IA! for adjustment.



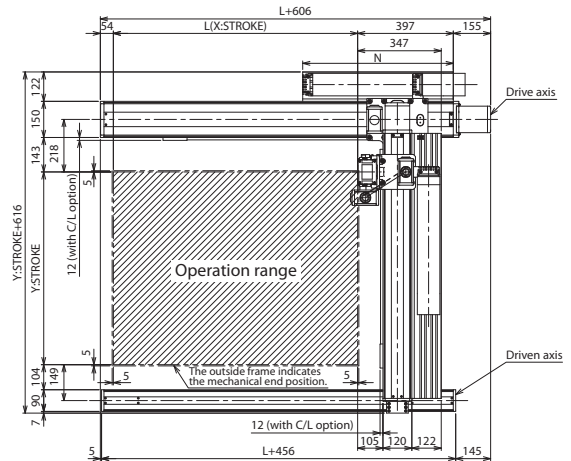
Cable track sectional view

Cable track location	G
First axis	40
Second axis	60

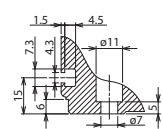
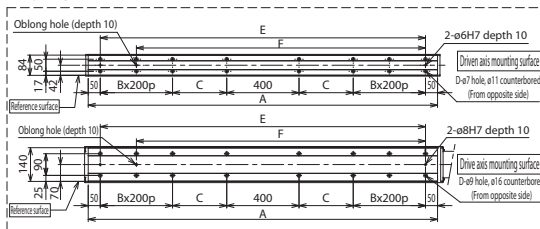
(Configuration direction: 1)



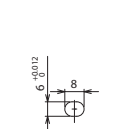
The outside frame indicates the mechanical end position.



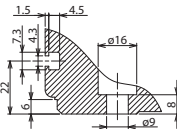
Arrow view P



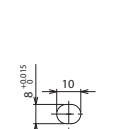
Drive axis base mounting hole details



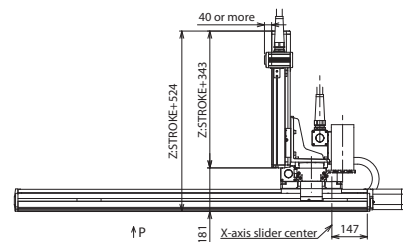
Drive axis base oblong hole details



Drive axis base mounting hole details



Drive axis base oblong hole details



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-G2J□HS3M

ICSPB3-G2J□HS3M

High-Precision Specification

±10µm Standard

±5µm High-Precision

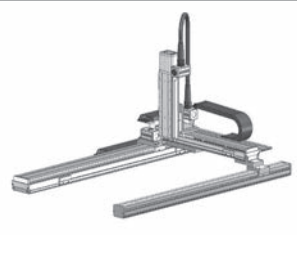
Battery-less Absolute

X-Y-Z 3-axis

XYG+ZS (Y Horiz Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	80: 800mm 120: 1200mm (Every 100mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

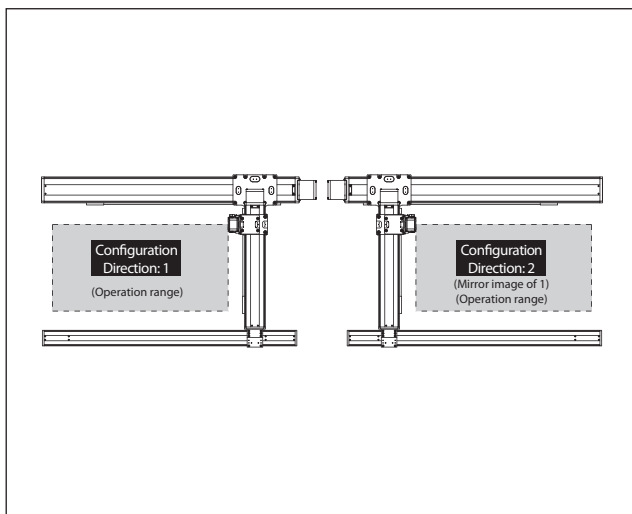
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-G2J1HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-G2J2HS3M-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXUWX-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM05-N-0-0-②	—
Y-axis	ISB[ISPB]-MXMX-①-200-20-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑨ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	80: 800mm 120: 1200mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CTSC: Cable track - Cable track + Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

G2J□HS3M

Z-axis stroke	Y-axis stroke 800~1,200	
	100	150
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	
450	9.8	
500	9.2	

Maximum Speed by Stroke (mm/s) (Note 4)

G2J□HS3M

	100~500	800~900	1000~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—	—	1200	1150	1000	950	830	740	650	590	490	540	490	440	370	340	
Y-axis	—	1200	1100	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

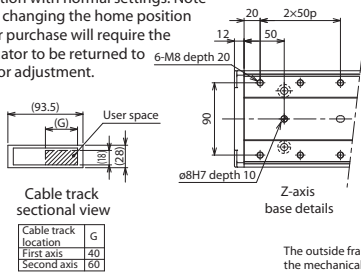
ICSB3 [ICSPB3]-G2J□HS3M-CT-CTSC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.

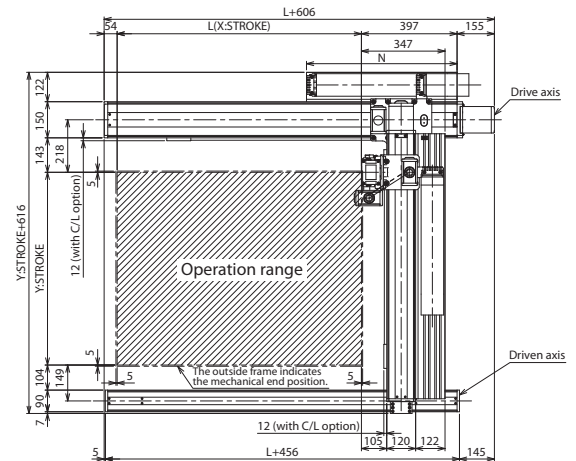
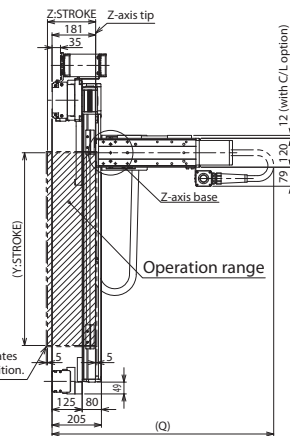


* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

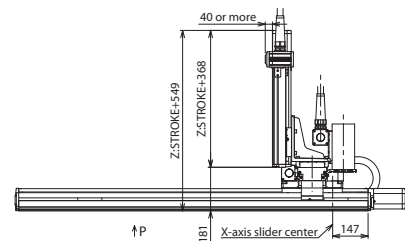
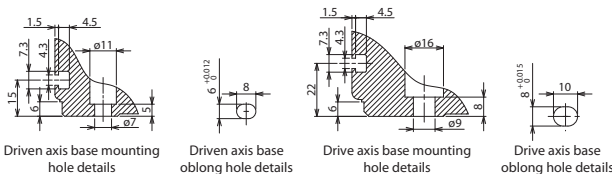
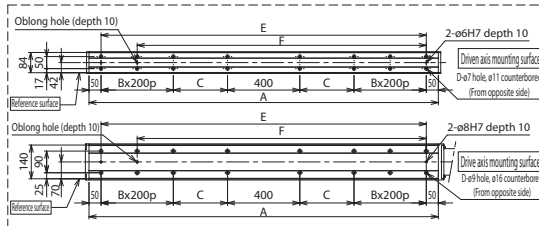


Cable track location	G
First axis	40
Second axis	60

(Configuration direction: 1)



Arrow view P



Q dimension

Z-axis stroke	100	150	200	250	300	350	400	450	500
Q	900	950	1000	1050	1100	1150	1200	1250	1300

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850	2950
B	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3
C	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575	625
D	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20	20
E	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
F	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GB□HB1□

ICSPB3-GB□HB1□

High-Precision Specification



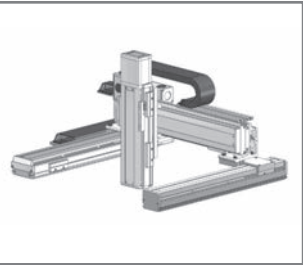
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm)	30: 300mm table 60: 600mm table (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

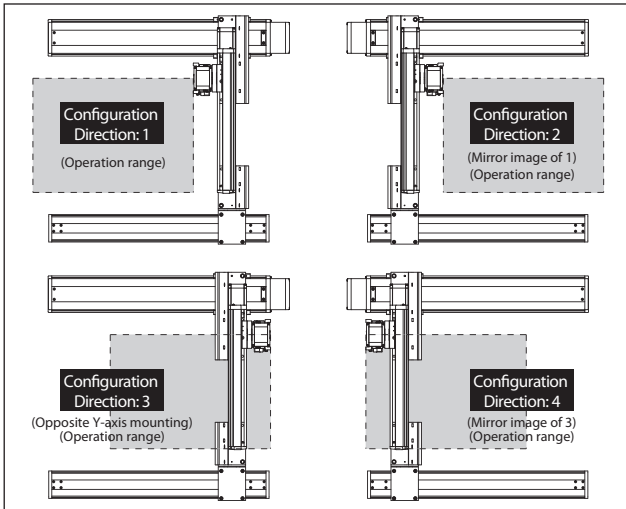
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB1HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GB2HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB2HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GB3HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB3HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GB4HB1M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB4HB1L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -100-20- <u>2</u> -T2- <u>1</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-SXM- <u>1</u> -60-16- <u>4</u> -T2- <u>1</u> - <u>3</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>5</u> - <u>6</u> -T2- <u>1</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [5] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [1] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□HB1M

Z-axis stroke	Y-axis stroke				
	300-400	450	500	550	600
100	7.0	7.0	7.0	6.6	5.1
150		7.0	7.0	6.2	4.7
200		7.0	7.0	5.8	4.3
250		7.0	6.8	5.4	3.9
300		6.7	6.5	5.1	3.6

■GB□HB1L

Z-axis stroke	Y-axis stroke						
	300	350	400	450	500	550	600
100	7.6	7.6	7.3	6.9	6.6	6.1	5.8
150	7.2	7.2	6.9	6.5	6.2	5.8	5.5
200	6.9	6.9	6.6	6.1	5.8	5.4	5.1
250	6.5	6.5	6.2	5.8	5.5	5.1	4.8
300	6.3	6.2	5.9	5.5	5.2	4.8	4.5

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□HB1M

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis	1200						
Y-axis	960						
Z-axis	480						

■GB□HB1L

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis	1200						
Y-axis	960						
Z-axis	240						

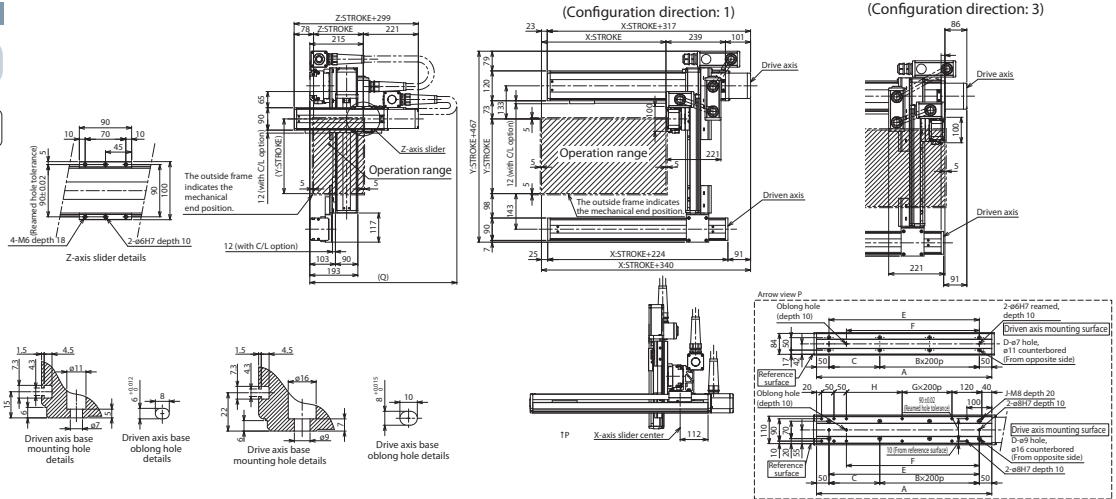
ICSB3 [ICSPB3]-GB□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600
Q	700	750	750	800	800	850	850

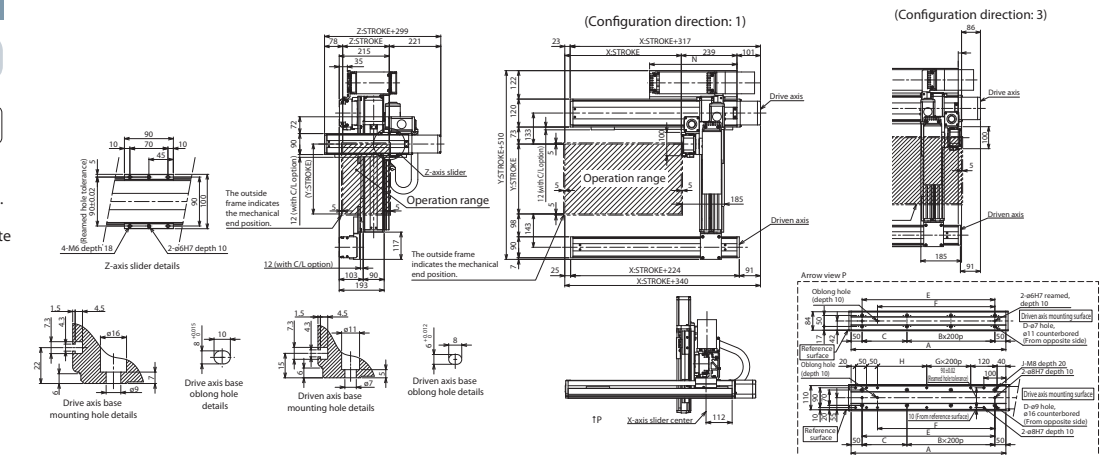
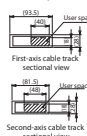
ICSB3 [ICSPB3]-GB□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GB MB1

ICSPB3-GB MB1

High-Precision Specification

±10µm Standard

±5µm High-Precision

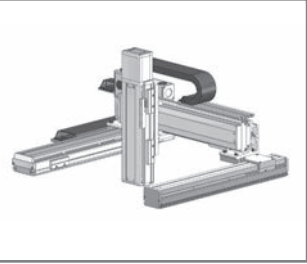
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> (Every 50mm) * For self-standing cable specification	30: 300mm 60: 600mm table (Every 50mm)	10: 100mm 30: 300mm table (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

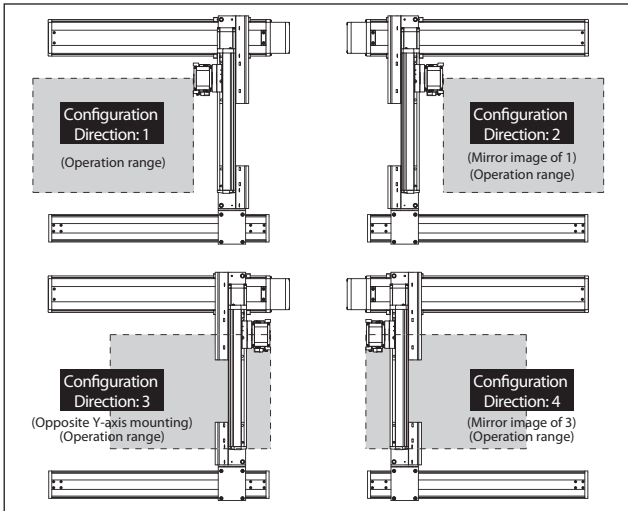
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB1MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GB2MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB2MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GB3MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB3MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GB4MB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GB4MB1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-SXM-①-60-8-④-T2-⑤-⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ④ in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ⑧ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□MB1M

		Y-axis stroke 300-600
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	

■GB□MB1L

		Y-axis stroke 300-600
Z-axis stroke	100	14.0
	150	
	200	
	250	
	300	

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□MB1M

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis	600			430	345	280	230
Y-axis	—	480			—		
Z-axis	480			—			

■GB□MB1L

	100-300	300-600	650-700	750-800	850-900	950-1000	1050-1100
X-axis	600			430	230	280	230
Y-axis	—	480			—		
Z-axis	240			—			

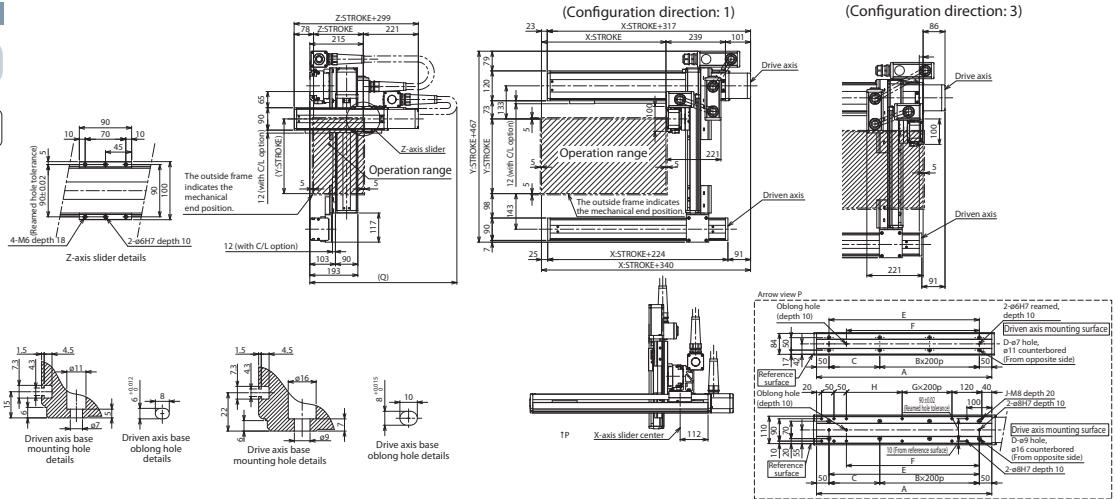
ICSB3 [ICSPB3]-GB□MB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600
Q	700	750	750	800	800	850	850

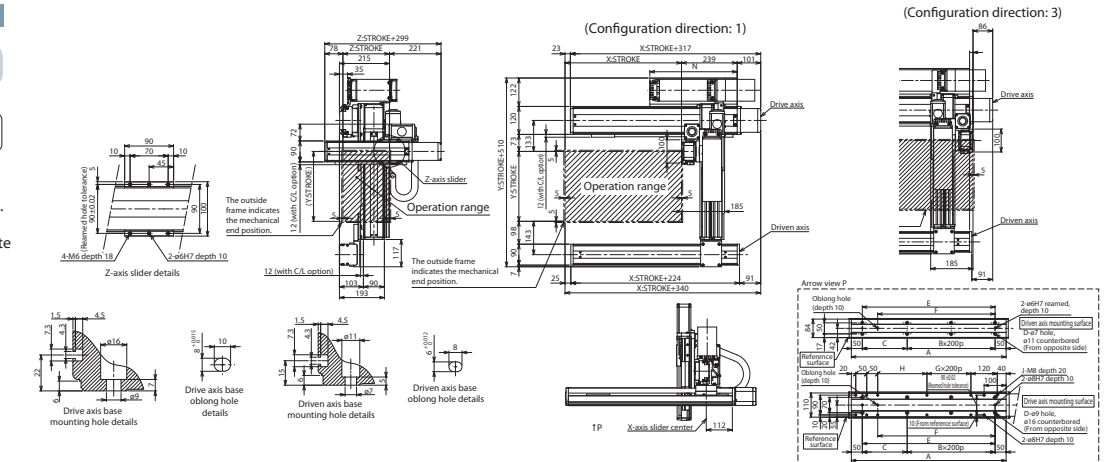
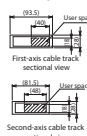
ICSB3 [ICSPB3]-GB□MB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□HB1□

ICSPB3-GC□HB1□ High-Precision Specification

±10µm Standard

±5µm High-Precision

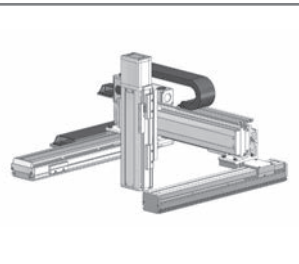
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: SmI (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm > 100: 1000mm (Every 50mm) * Refer to Options table below	30: 300mm 70: 700mm (Every 50mm) Refer to Options table below	10: 100mm 40: 400mm Refer to Options table below	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

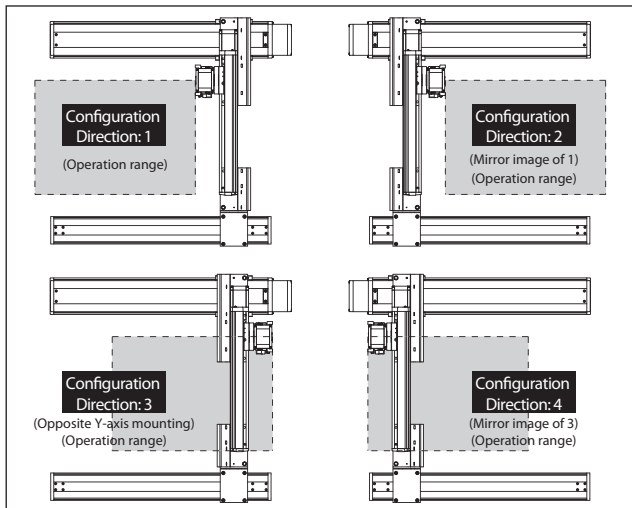
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4HB1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑤-⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑧] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑤] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑨] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□HB1M

		Y-axis stroke 300~700
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	
	350	
	400	

GC□HB1L

		Y-axis stroke 300~650	700
Z-axis stroke	100	14.0	14.0
	150		14.0
	200		14.0
	250		14.0
	300		14.0
	350		13.9
	400		13.6

Maximum Speed by Stroke (mm/s) (Note 4)

GC□HB1M

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	480						

GC□HB1L

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	240						

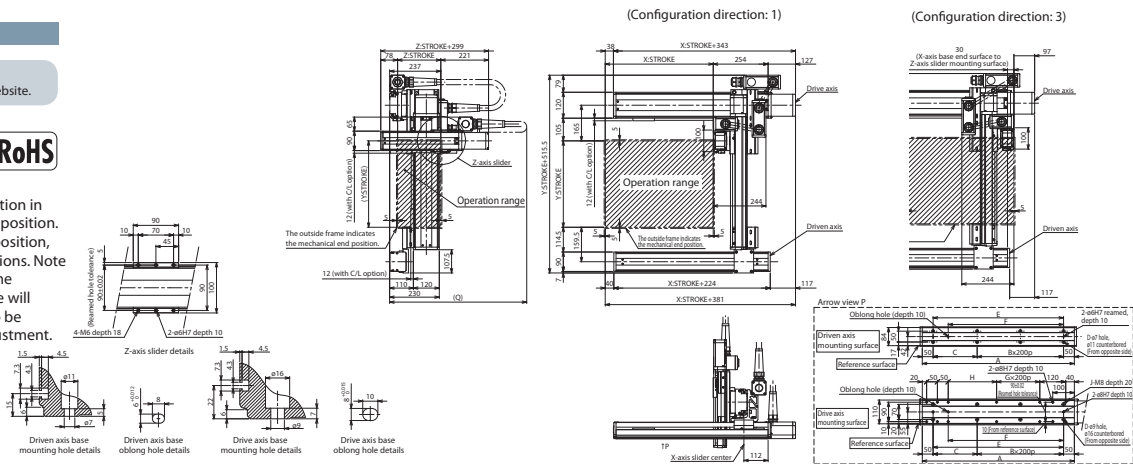
ICSB3 [ICSPB3]-GC□HB1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	300	350	400	450	500	550	600	650	700										
Q	750	750	800	800	850	850	850	900	900										

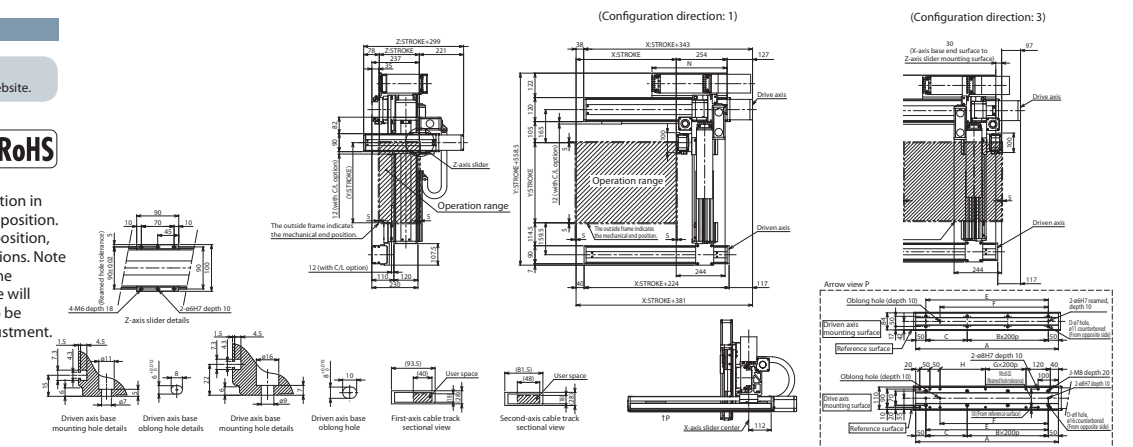
ICSB3 [ICSPB3]-GC□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□HB2□

ICSPB3-GC□HB2□

High-Precision Specification

±10μm Standard

±5μm High-Precision

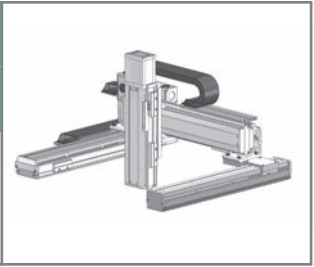
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm table <100: 1000mm> (Every 50mm) * For self-standing cable specification	30: 300mm 70: 700mm table (Every 50mm)	10: 100mm 40: 400mm table (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

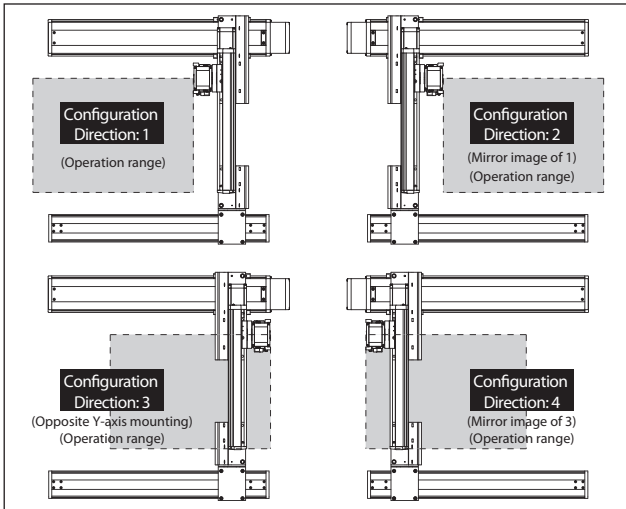
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4HB2M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4HB2L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-⑤-⑥-T2-③-④-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑦] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑤] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [⑧] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□HB2M

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Z-axis stroke	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.9
	300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
	350	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0	

■GC□HB2L

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Z-axis stroke	100	13.0	13.0	13.0	12.9	12.9	12.9	12.9	12.8	11.8
	150	12.5	12.4	12.4	12.4	12.4	12.4	12.4	12.3	11.2
	200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6
	250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9
	300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3
	350	10.1	10.1	10.1	10.1	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0	

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□HB2M

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	600						

■GC□HB2L

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200						
Z-axis	300						

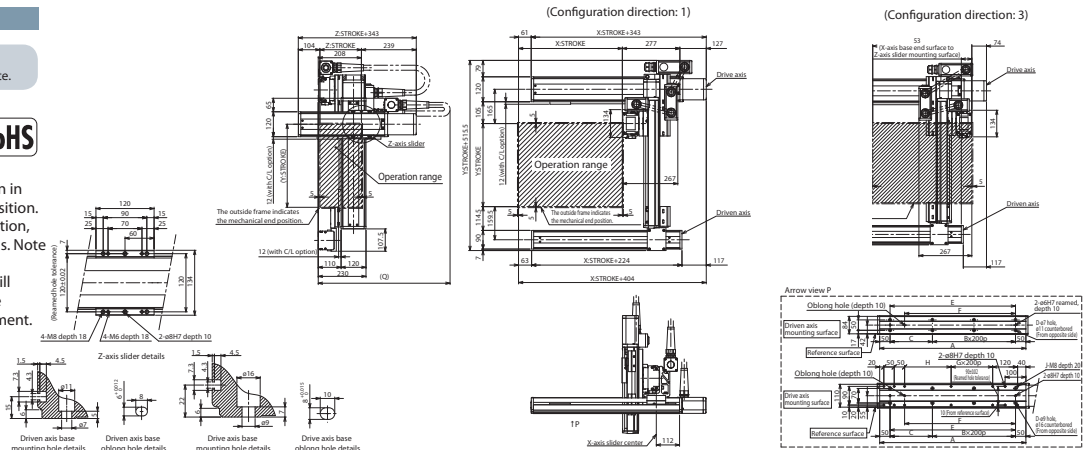
ICSB3 [ICSPB3]-GC□HB2□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

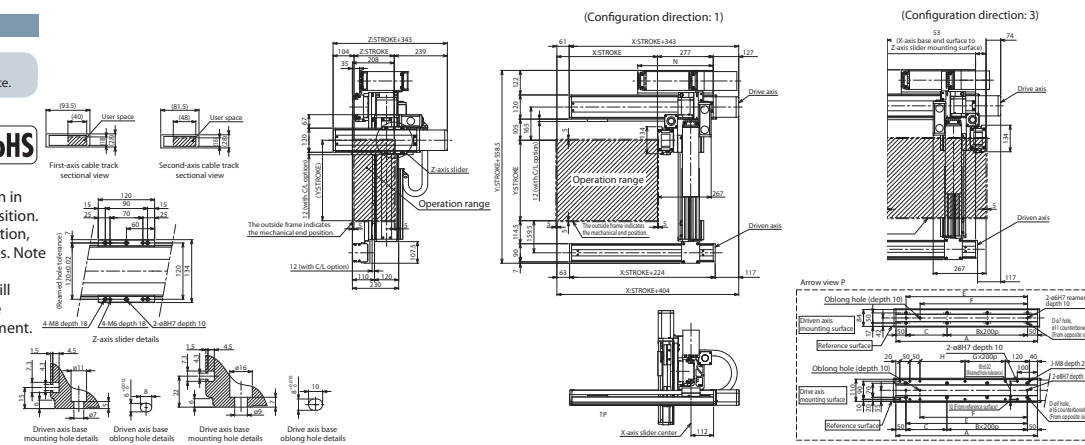
ICSB3 [ICSPB3]-GC□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□HB3H

ICSPB3-GC□HB3H

High-Precision Specification



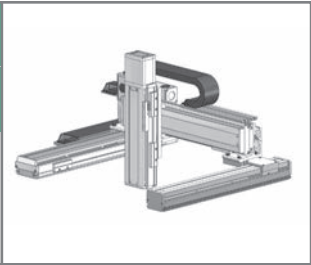
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

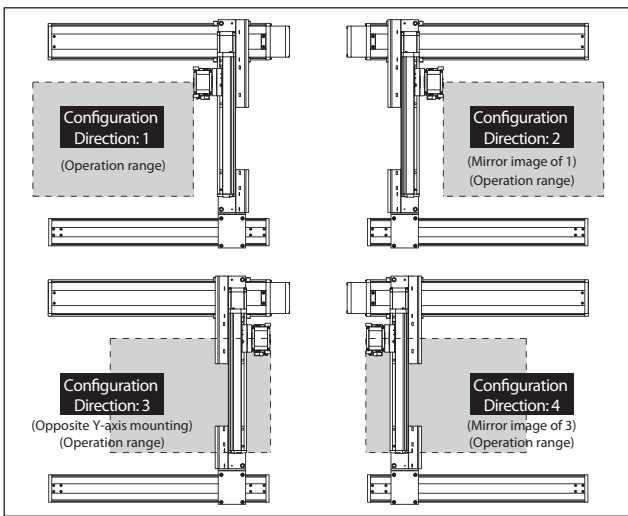
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm)	Y-axis Stroke/Option	30: 300mm 70: 700mm table (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	H	ICSB3[ICSPB3]-GC1HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	H	ICSB3[ICSPB3]-GC2HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
3	H	ICSB3[ICSPB3]-GC3HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
4	H	ICSB3[ICSPB3]-GC4HB3H- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- [1] -200-20- [2] -T2- [3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXM- [1] -100-20- [2] -T2- [3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- [1] -200-20- [2] -T2- [3]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [10] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm (±0.005mm)
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□HB3H

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Z-axis stroke	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
	250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
	300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.7
	350	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.5	8.1
	400	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0	7.5

Maximum Speed by Stroke (mm/s) (Note 4)

GC□HB3H

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	1200						
Y-axis	1200			—			
Z-axis	1200			—			

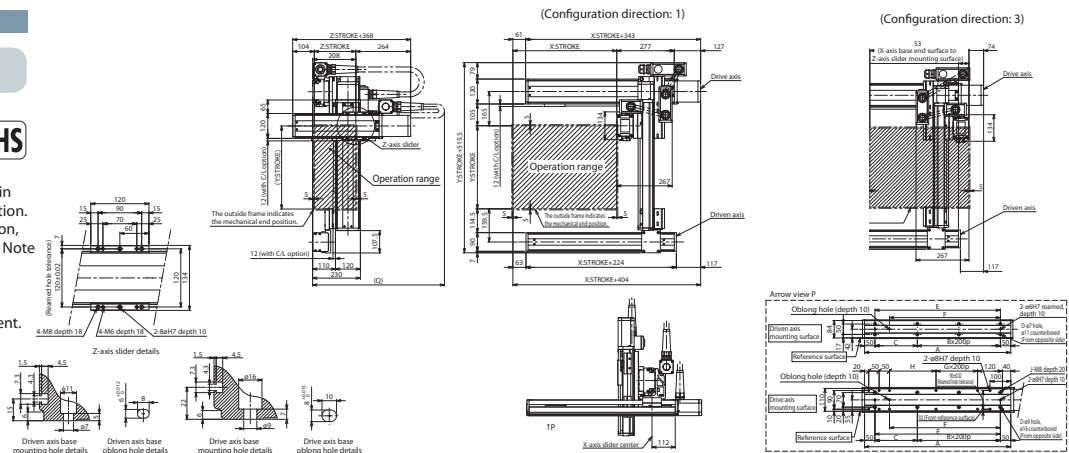
ICSB3 [ICSPB3]-GC□HB3H-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

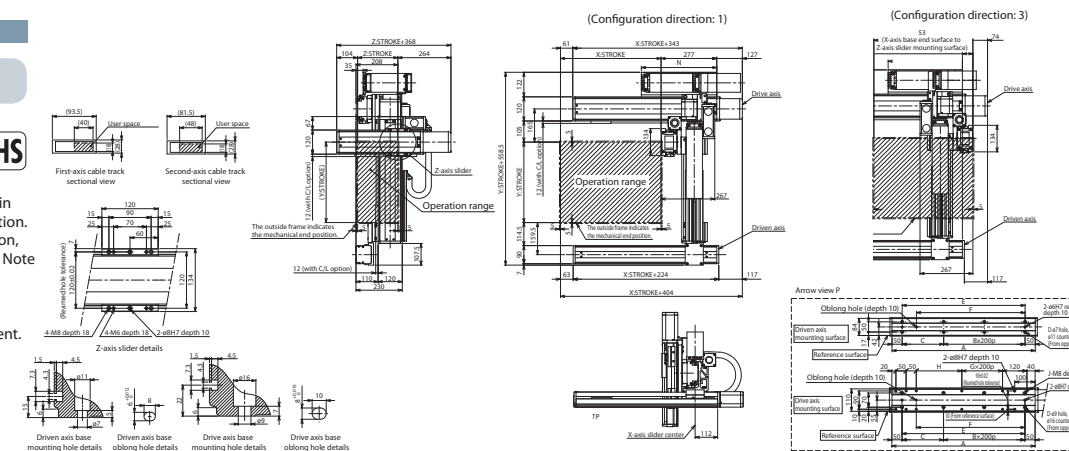
ICSB3 [ICSPB3]-GC□HB3H-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□MB2L

ICSPB3-GC□MB2L High-Precision Specification



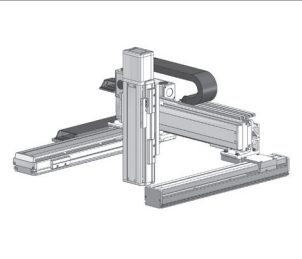
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 110: 1100mm <100: 1000mm> * below. (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

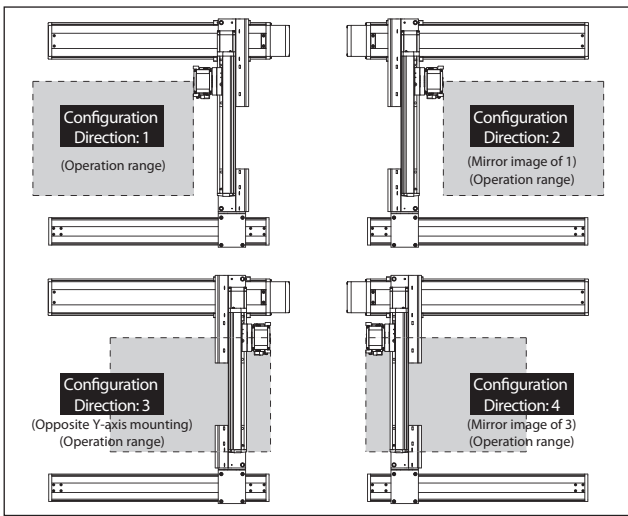
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GC1MB2L-①-②③④⑤⑥⑦-T2-⑧⑨
2	L	ICSB3[ICSPB3]-GC2MB2L-①-②③④⑤⑥⑦-T2-⑧⑨
3	L	ICSB3[ICSPB3]-GC3MB2L-①-②③④⑤⑥⑦-T2-⑧⑨
4	L	ICSB3[ICSPB3]-GC4MB2L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-100-5-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	100W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□MB2L

		Y-axis stroke								
		300	350	400	450	500	550	600	650	700
Z-axis stroke	100	17.6	17.2	16.8	16.5	16.1	15.5	14.9	13.9	11.8
	150	17.0	16.6	16.2	15.9	15.5	14.9	14.4	13.3	11.2
	200	16.4	16.0	15.6	15.3	14.9	14.4	13.8	12.7	10.6
	250	15.7	15.3	14.9	14.6	14.2	13.8	13.2	12.0	9.9
	300	15.1	14.7	14.3	14.0	13.6	13.2	12.7	11.4	9.3
	350	14.4	14.0	13.6	13.3	12.9	12.5	12.0	10.7	8.6
	400	13.8	13.4	13.0	12.7	12.3	11.9	11.5	10.1	8.0

Maximum Speed by Stroke (mm/s) (Note 4)

GC□MB2L

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600			430	345	280	230
Y-axis	600						
Z-axis	300						

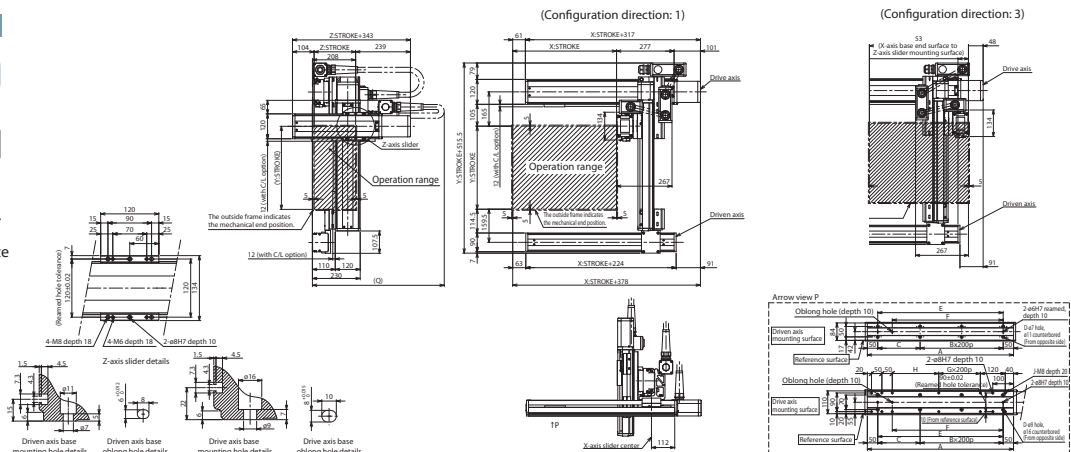
ICSB3 [ICSPB3]-GC□MB2L-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	3	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

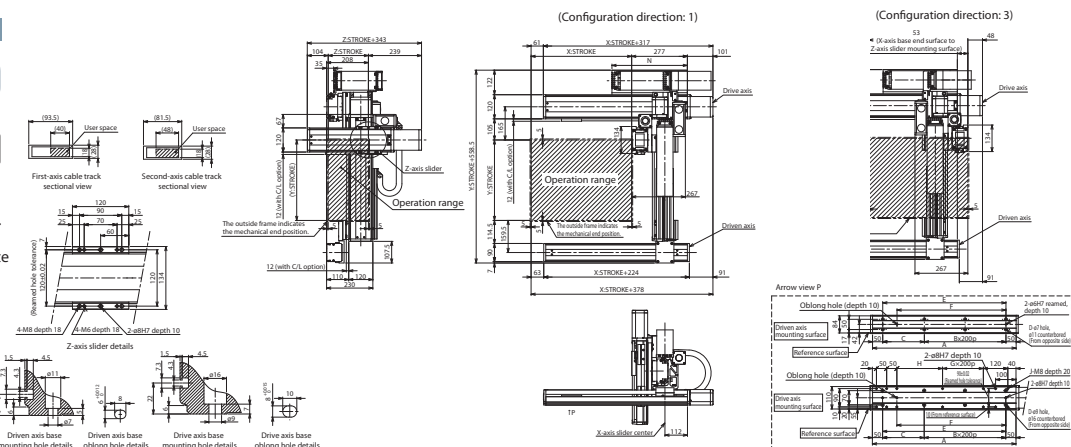
ICSB3 [ICSPB3]-GC□MB2L-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	3	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GC□MB3M

ICSPB3-GC□MB3M

High-Precision Specification

±10µm

±5µm

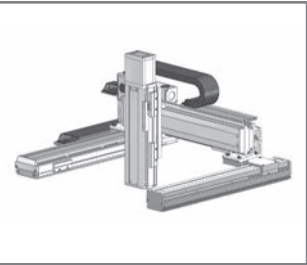
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

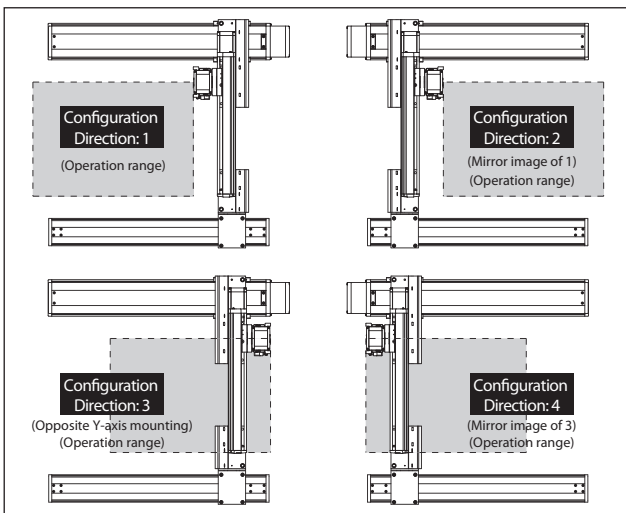
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 110: 1100mm table <100: 1000mm> * below. (Every 50mm)	Y-axis Stroke/Option	30: 300mm 70: 700mm table (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GC1MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GC2MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GC3MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GC4MB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-10-[2]-T2-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[2]-T2-[3]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with [8] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 110: 1100mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axis increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□MB3M

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	17.1	16.7	16.3	16.0	15.6	15.0	14.5	13.4	11.3
150	16.4	16.0	15.6	15.3	14.9	14.4	13.8	12.7	10.6
200	15.8	15.4	15.0	14.7	14.3	13.9	13.3	12.1	10.0
250	15.1	14.7	14.3	14.0	13.6	13.2	12.7	11.4	9.3
300	14.5	14.1	13.7	13.4	13.0	12.6	12.1	10.8	8.7
350	13.9	13.5	13.1	12.8	12.4	12.0	11.6	10.2	8.1
400	13.3	12.9	12.5	12.2	11.8	11.4	11.0	9.6	7.5

Maximum Speed by Stroke (mm/s) (Note 4)

GC□MB3M

	100~300	300~400	450~700	750~800	850~900	950~1000	1050~1100
X-axis	600			430	345	280	230
Y-axis	600						
Z-axis	600						

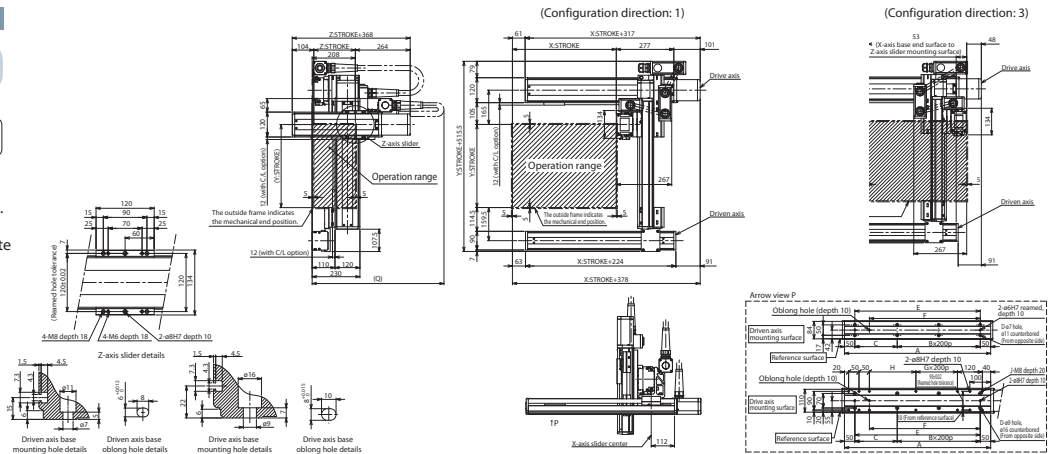
ICSB3 [ICSPB3]-GC□MB3M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700
Q	750	800	800	850	850	850	900	900	950

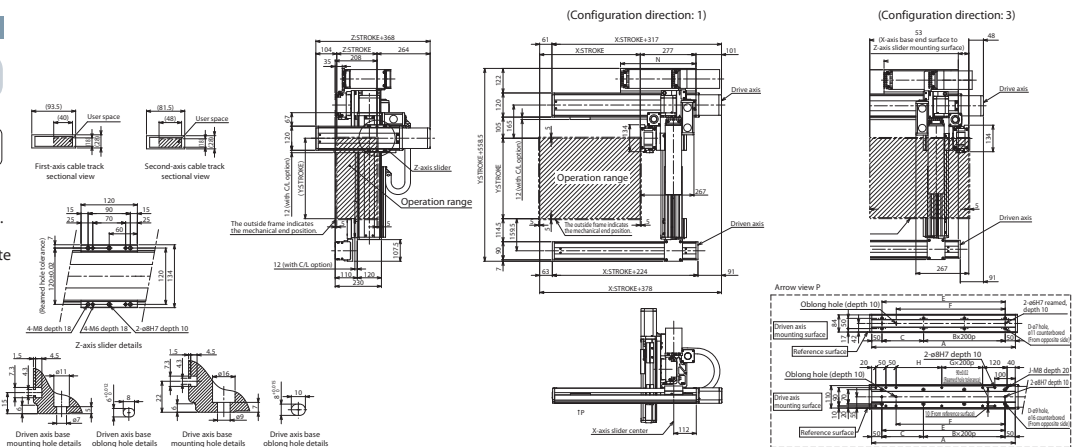
ICSB3 [ICSPB3]-GC□MB3M-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204	1254	1304
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675

ICSB3-GD HB1

ICSPB3-GD HB1

High-Precision Specification

±10µm Standard

±5µm High Precision

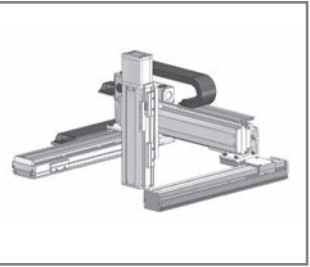
Battery-less Absolute

X-Y-Z 3-axis

XYB+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

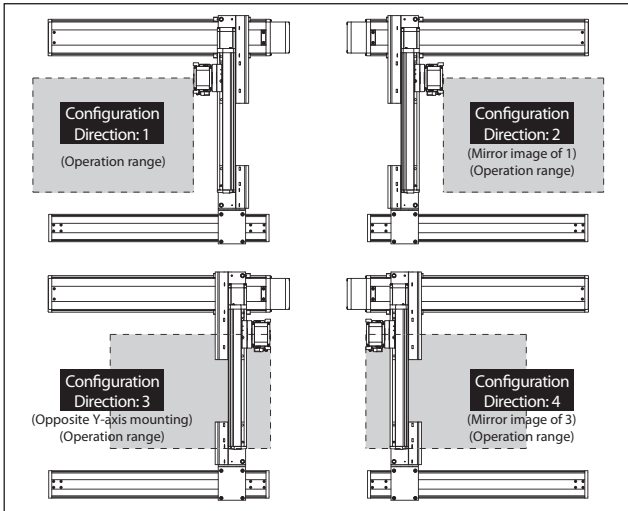
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GD1HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GD1HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GD2HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GD2HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GD3HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GD3HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GD4HB1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GD4HB1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [①] through [⑨] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-②-T2-③④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥⑦-T2-⑧⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [①] through [⑨] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [⑧] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [⑨] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HB1M

		Y-axis stroke 300~700
Z-axis stroke	100	7.0
	150	
	200	
	250	
	300	
	350	
	400	

GD□HB1L

		Y-axis stroke	
		300~650	700
Z-axis stroke	100	14.0	14.0
	150		14.0
	200		14.0
	250		14.0
	300		14.0
	350		13.9
	400		13.6

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HB1M

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	—	480	—	—	—	—	—	—	—	—	—	—	—

GD□HB1L

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	—	240	—	—	—	—	—	—	—	—	—	—	—

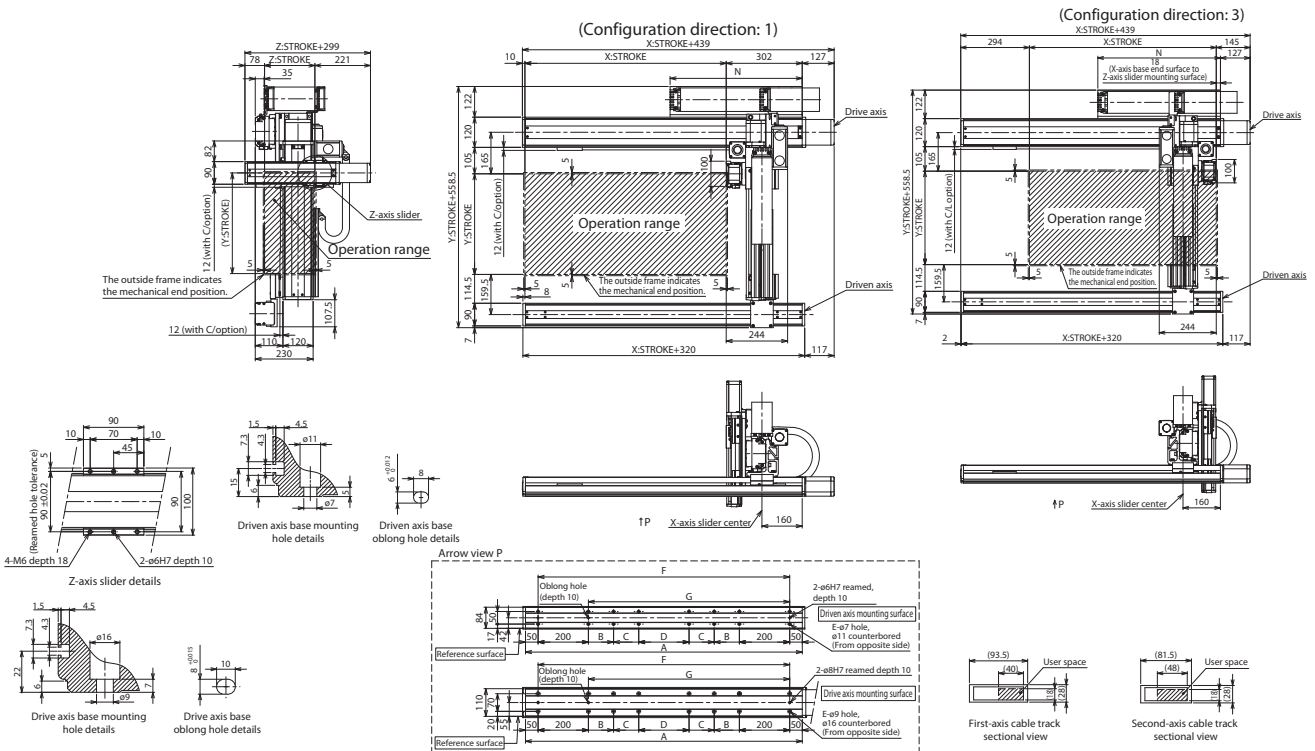
ICSB3 [ICSPB3]-GD□HB1□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-GD HB2

ICSPB3-GD HB2

High-Precision Specification



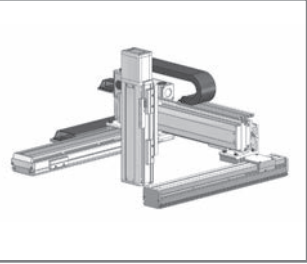
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* <small>*Coming soon</small>	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

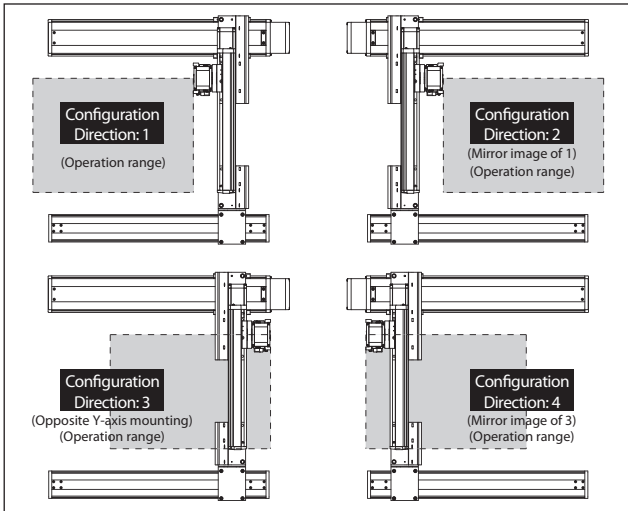
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GD1HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD1HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GD2HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD2HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GD3HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD3HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GD4HB2M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD4HB2L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[2]-T2-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-100-[4]-[5]-T2-[3]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [9] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [8] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HB2M

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.9
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
350	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0

GD□HB2L

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	13.0	13.0	13.0	12.9	12.9	12.9	12.9	12.8	11.8
150	12.5	12.4	12.4	12.4	12.4	12.4	12.3	12.3	11.2
200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6
250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9
300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3
350	10.1	10.1	10.1	10.1	10.0	10.0	10.0	10.0	8.6
400	9.6	9.6	9.5	9.5	9.5	9.5	9.5	9.4	8.0

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HB2M

	100-300	300-400	450-700	800-1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—

GD□HB2L

	100-300	300-400	450-700	800-1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—

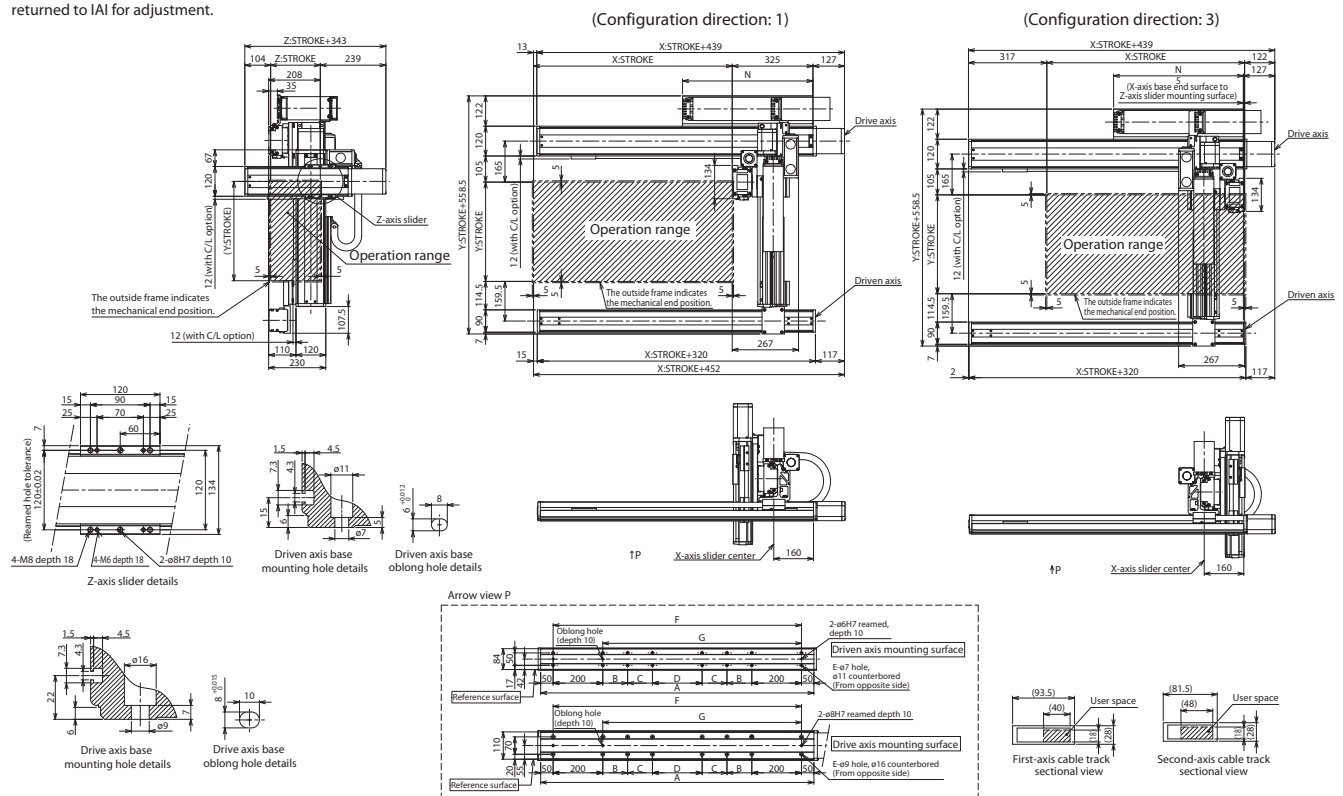
ICSB3 [ICSPB3]-GD□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-GD HB3H

ICSPB3-GD HB3H

High-Precision Specification



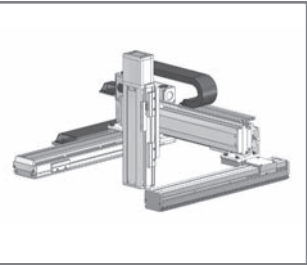
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

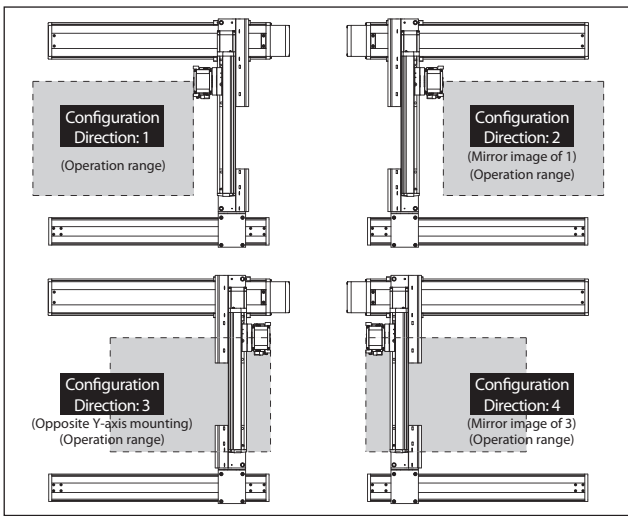
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	H	ICSB3[ICSPB3]-GD1HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
2	H	ICSB3[ICSPB3]-GD2HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
3	H	ICSB3[ICSPB3]-GD3HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
4	H	ICSB3[ICSPB3]-GD4HB3H-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	80: 800mm ? 200: 2000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXMX-①-200-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-③-T2-④⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-20-⑥-T2-⑦⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names.

Please refer to P.11 for the exit directions.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.

When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HB3H

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
150	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
200	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
250	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.3
300	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.7
350	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.5	8.1
400	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0	7.5

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HB3H

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—			1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—												
Z-axis	1200												

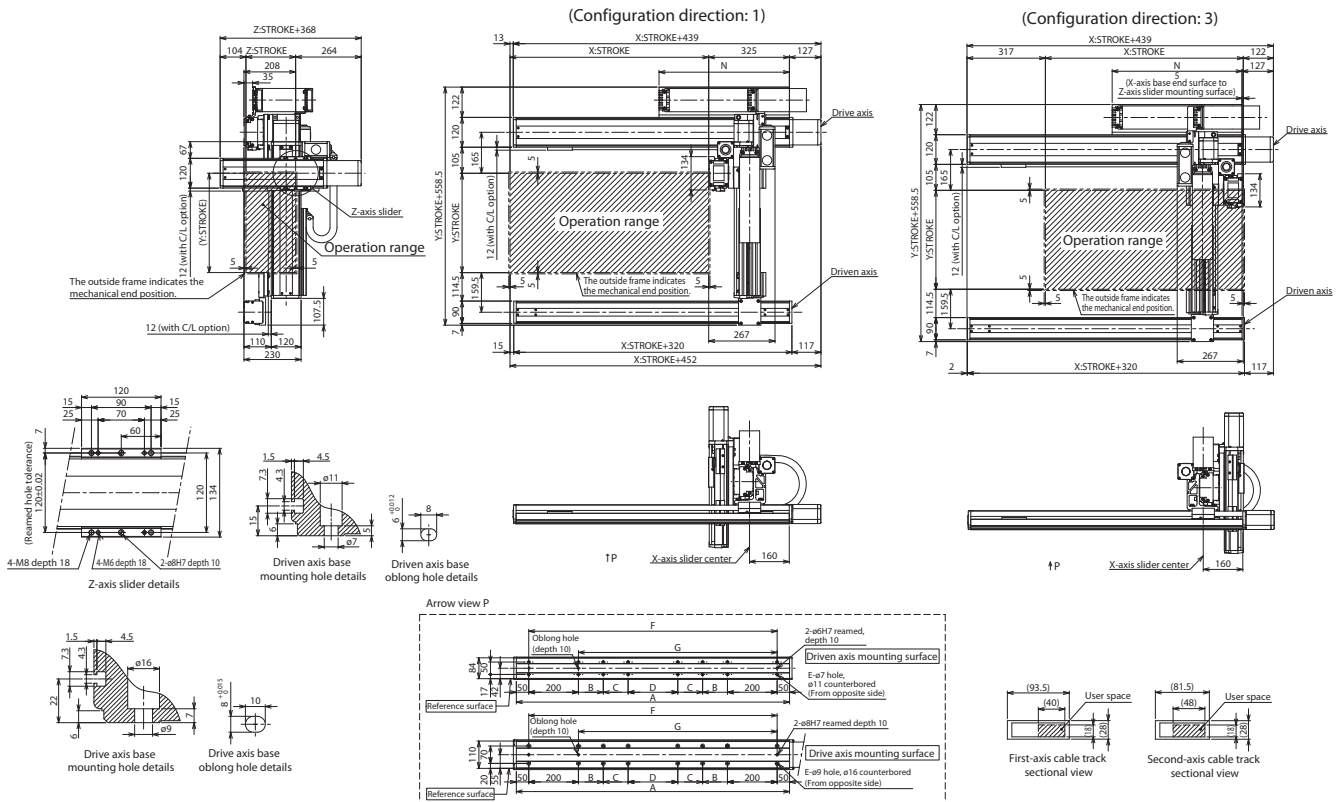
ICSB3 [ICSPB3]-GD□HB3H-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

ICSB3-GE□HB1L

ICSPB3-GE□HB1L High-Precision Specification



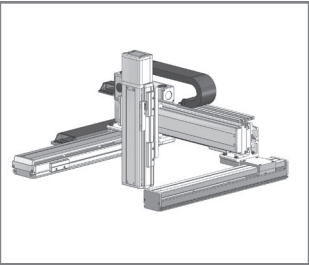
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Mg (200W)
Z: SmI (60W)



Model Specification Items

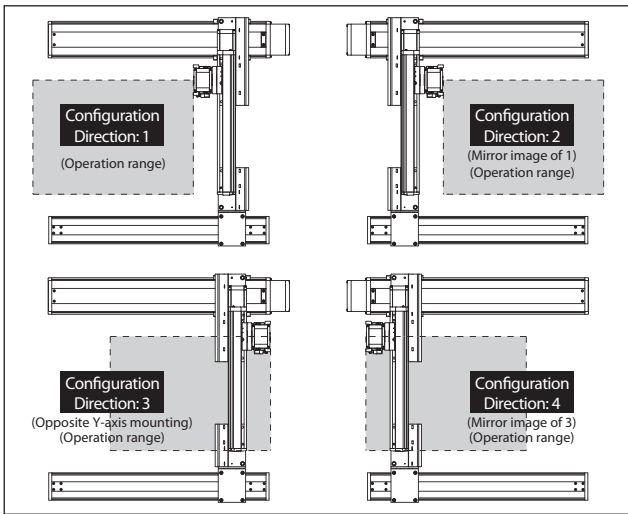
Series	GE□HB1L	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <100: 1000mm> * For self-standing cable specification	Refer to Options table (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GE1HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	L	ICSB3[ICSPB3]-GE2HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	L	ICSB3[ICSPB3]-GE3HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	L	ICSB3[ICSPB3]-GE4HB1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-①-400-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-⑤	—
Y-axis	ISB[ISPB]-MXM-①-200-20-③-T2-④-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-4-⑥-⑦-T2-⑧-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑩ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 130: 1300mm (100: 1000mm) *1
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? : 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

Y-axis stroke	
300-900	
Z-axis stroke	14.0
100	
150	
200	
250	
300	
350	
400	
450	
500	

Maximum Speed by Stroke (mm/s) (Note 4)

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1,200	1250-1300
X-axis		1200			920	765	645	550	440
Y-axis		1200		860	695				
Z-axis	240								

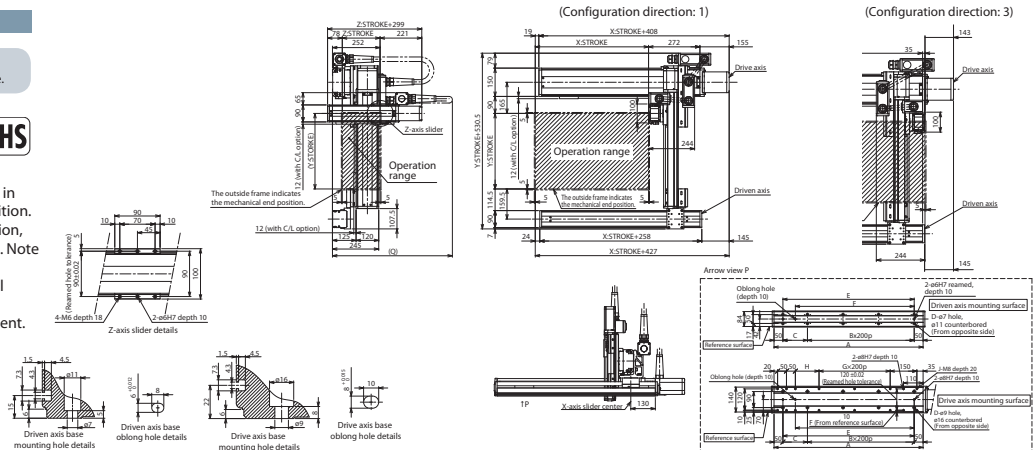
ICSB3 [ICSPB3]-GE□HB1L-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



*The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700	750	800	850	900
Q	700	800	800	800	850	850	900	900	950	950	1000	1000	1000

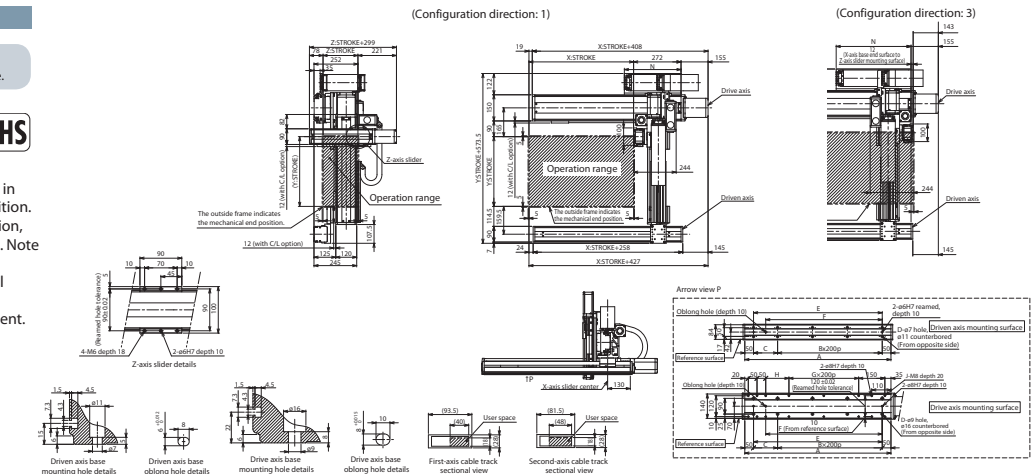
ICSB3 [ICSPB3]-GE□HB1L-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



*The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-GE HB2

ICSPB3-GE HB2 High-Precision Specification



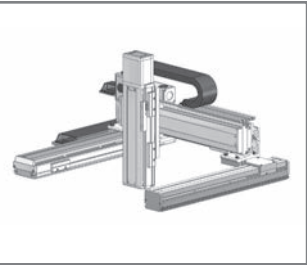
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

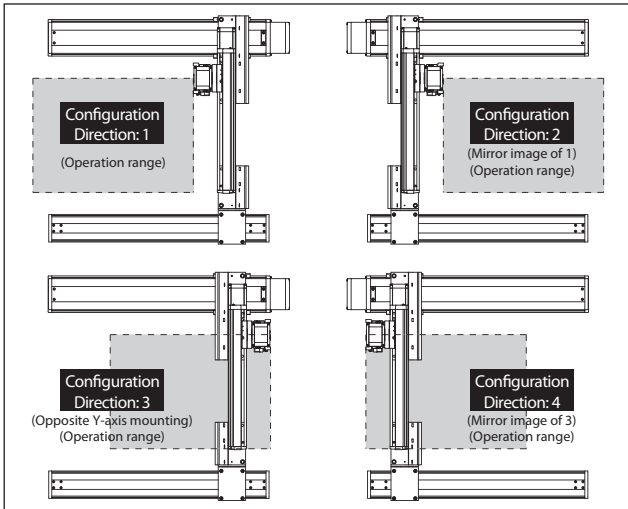
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 130: 1300mm table 30: 300mm 90: 900mm table 100: 1000mm > * below. (Every 50mm)	Y-axis Stroke/Option	30: 300mm 90: 900mm table (Every 50mm)	Z-axis Stroke/Option	10: 100mm 50: 500mm Refer to Options table below.	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1HB2M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GE1HB2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
2	M	ICSB3[ICSPB3]-GE2HB2M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GE2HB2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
3	M	ICSB3[ICSPB3]-GE3HB2M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GE3HB2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
4	M	ICSB3[ICSPB3]-GE4HB2M- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]
	L	ICSB3[ICSPB3]-GE4HB2L- [1] - [2] - [3] - [4] - [5] - [6] - [7] -T2- [8] - [9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM- [1] -400-20- [2] -T2- [3] - [4]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0- [2]	—
Y-axis	ISB[ISPB]-MXM- [1] -200-20- [2] -T2- [3] - [4]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- [1] -100- [2] - [3] -T2- [4] - [5] - [6]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [2] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [3] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GE□HB2M

Z-axis stroke	Y-axis stroke 300-900	
	100	10.0
150		
200		
250		
300		
350		
400		
450		
500		

GE□HB2L

Z-axis stroke	Y-axis stroke				
	300-700	750	800	850	900
100	20.0	20.0	18.9	16.8	
150	20.0	20.0	18.3	16.2	
200	20.0	20.0	17.7	15.6	
250	20.0	19.4	17.0	14.9	
300	20.0	18.8	16.4	14.3	
350	20.0	18.1	15.7	13.6	
400	20.0	17.5	15.1	13.0	
450	19.4	16.9	14.5	12.4	
500	18.8	16.3	13.9	11.8	

Maximum Speed by Stroke (mm/s) (Note 4)

GE□HB2M

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis		1200			920	765	645	550	440
Y-axis		1200	860	695					
Z-axis	600								

GE□HB2L

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300
X-axis		1200			920	765	645	550	440
Y-axis		1200	860	695					
Z-axis	300								

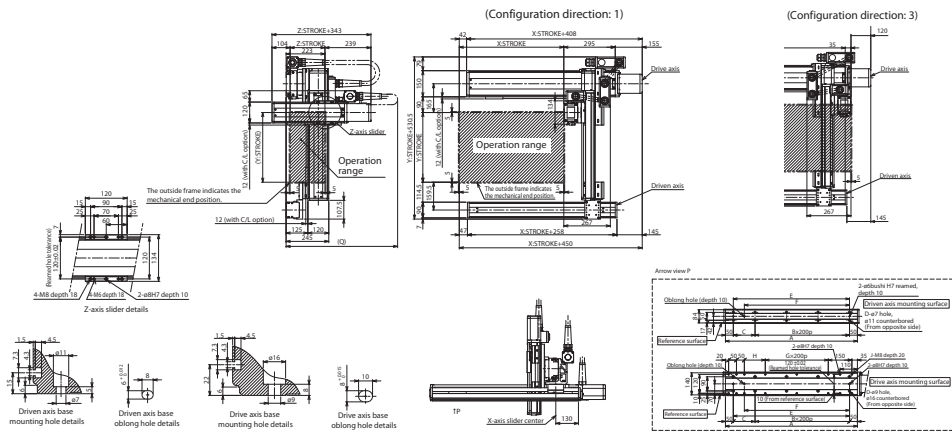
ICSB3 [ICSPB3]-GE□HB2□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

Y-axis stroke	300	350	400	450	500	550	600	650	700	750	800	850	900
Q	800	800	800	850	850	900	900	950	950	1000	1000	1000	1050

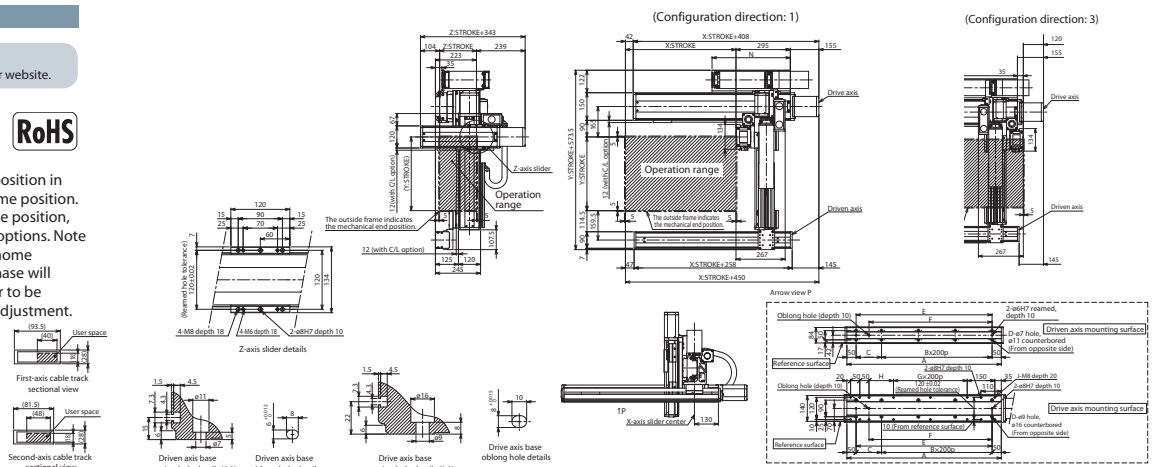
ICSB3 [ICSPB3]-GE□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-GE HB3

ICSPB3-GE HB3

High-Precision Specification



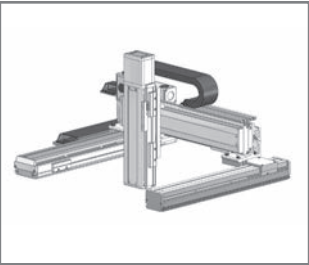
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	GE HB3	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 130: 1300mm <100: 1000mm> (Every 50mm) * 30: 300mm 90: 900mm (Every 50mm) Refer to Options table below.	10: 100mm 50: 500mm (Every 50mm) Refer to Options table below.	10: 100mm 50: 500mm (Every 50mm) Refer to Options table below.	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA** ** Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below		

Model Specification

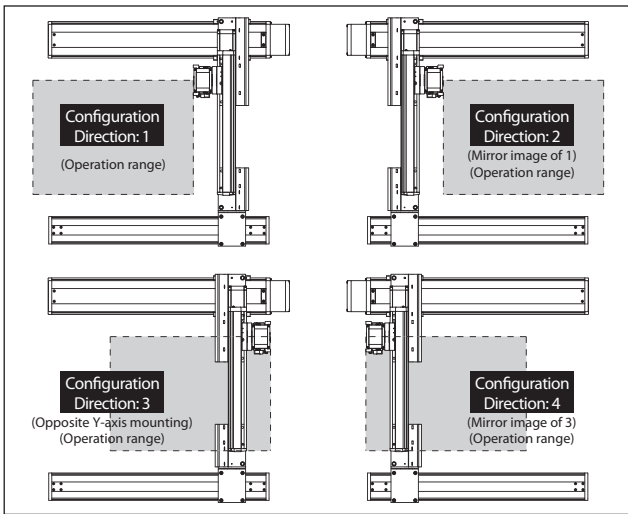
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-GE1HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-GE1HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE1HB3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	H	ICSB3[ICSPB3]-GE2HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-GE2HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE2HB3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	H	ICSB3[ICSPB3]-GE3HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-GE3HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE3HB3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	H	ICSB3[ICSPB3]-GE4HB3H-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	M	ICSB3[ICSPB3]-GE4HB3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE4HB3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[2]-[3]-T2-[4]-[5]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [5] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [2] in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with [3] in the above model names.

Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 130: 1300mm (100: 1000mm) *1
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable CT-CT: Cable track - Cable track

*1 The maximum X-axis stroke is 1000mm for the self-standing cable specification.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GE□HB3H

Z-axis stroke	Y-axis stroke	
	300-900	
	100	10.0
	150	
	200	
	250	
	300	
	350	
	400	
	450	
500		

GE□HB3M

Z-axis stroke	Y-axis stroke					
	300-700					
	100	20.0	20.0	18.4	16.3	
	150	20.0	20.0	17.7	15.6	
	200	20.0	19.5	17.1	15.0	
	250	20.0	18.8	16.4	14.3	
	300	20.0	18.2	15.8	13.7	
	350	20.0	17.6	15.2	13.1	
	400	19.5	17.0	14.6	12.5	
	450	18.8	16.3	13.9	11.8	
500	18.2	15.7	13.3	11.2		

GE□HB3L

Z-axis stroke	Y-axis stroke													
	100	31.8	31.4	31.1	30.7	30.3	29.9	29.5	29.1	26.1	23.3	20.8	18.4	16.3
	150	31.1	30.7	30.4	30.0	29.6	29.2	28.8	28.4	25.4	22.6	20.1	17.7	15.6
	200	30.5	30.1	29.8	29.4	29.0	28.6	28.2	27.8	24.8	22.0	19.5	17.1	15.0
	250	29.8	29.4	29.1	28.7	28.3	27.9	27.5	27.1	24.1	21.3	18.8	16.4	14.3
	300	29.2	28.8	28.5	28.1	27.7	27.3	26.9	26.5	23.5	20.7	18.2	15.8	13.7
	350	28.6	28.2	27.9	27.5	27.1	26.7	26.3	25.9	22.9	20.1	17.6	15.2	13.1
	400	28.0	27.6	27.3	26.9	26.5	26.1	25.7	25.3	22.3	19.5	17.0	14.6	12.5
	450	27.3	26.9	26.6	26.2	25.8	25.4	25.0	24.6	21.6	18.8	16.3	13.9	11.8
	500	26.7	26.3	26.0	25.6	25.2	24.8	24.4	24.0	21.0	18.2	15.7	13.3	11.2

Maximum Speed by Stroke (mm/s) (Note 4)

GE□HB3H

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300	
X-axis	1200				920	765	645	550	440	
Y-axis	1200		860	695	—					
Z-axis	1200									

GE□HB3M

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300	
X-axis	1200				920	765	645	550	440	
Y-axis	1200		860	695	—					
Z-axis	600									

GE□HB3L

	100-300	300-500	550-700	750-800	850-900	950-1000	1050-1100	1150-1200	1250-1300	
X-axis	1200				920	765	645	550	440	
Y-axis	1200		860	695	—					
Z-axis	300									

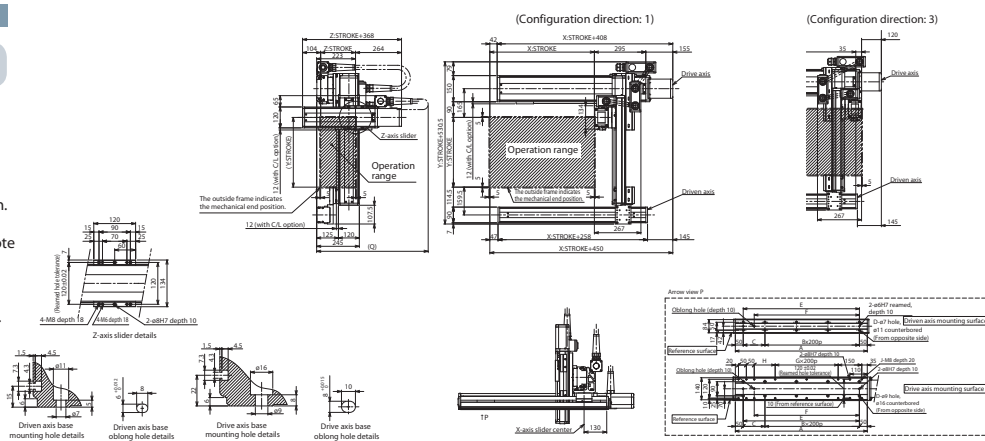
ICSB3 [ICSPB3]-GE□HB3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
Y-axis stroke	300	350	400	450	500	550	600	650	700	750	800	850	900						
Q	800	800	800	850	850	900	900	950	950	1000	1000	1000	1050						

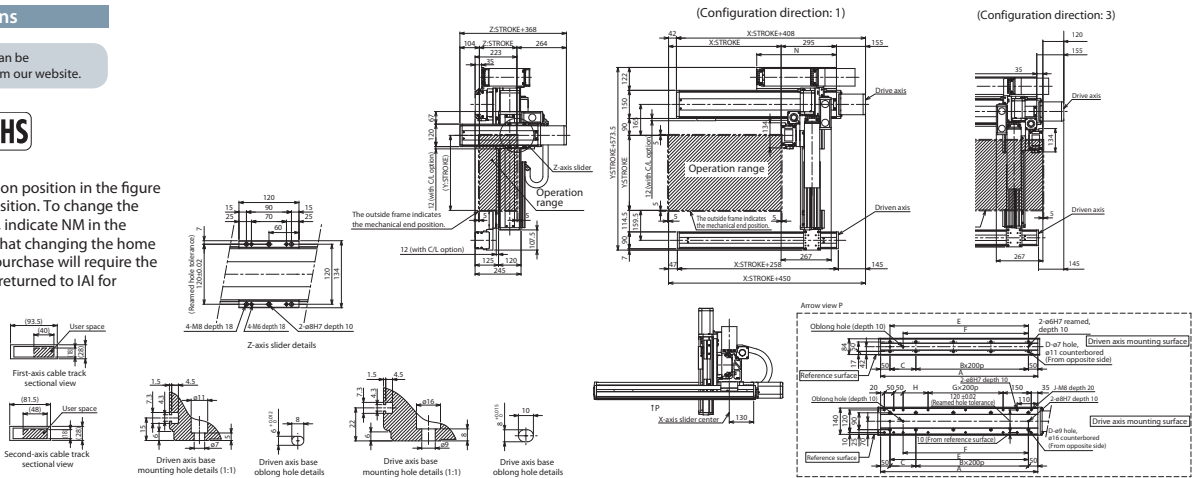
ICSB3 [ICSPB3]-GE□HB3□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238	288	138	188	238
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233	283	133	183	233
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
N	175	200	225	250	275	300	325	350	375	400	425	450	475	500	525	550	575	600	625	650	675	700	725	750	775

ICSB3-GF□HB1L

ICSPB3-GF□HB1L

High-Precision Specification



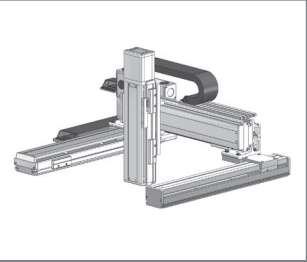
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X:Lg (400W)
Y: Mj (200W)
Z: SmI (60W)



Model Specification Items

Series	GF□HB1L	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below	

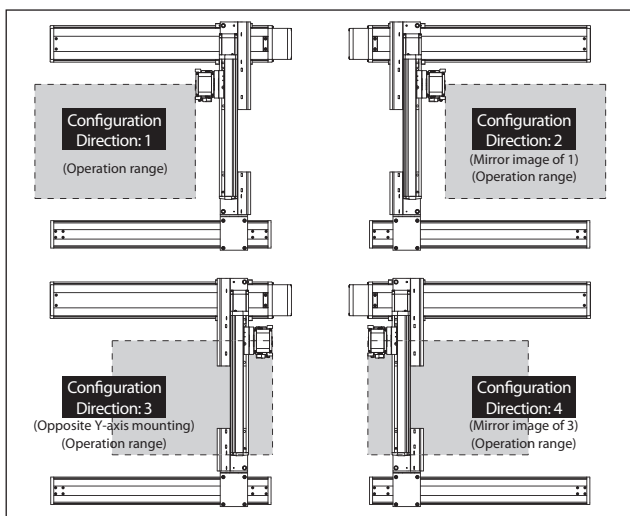
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GF1HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
2	L	ICSB3[ICSPB3]-GF2HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
3	L	ICSB3[ICSPB3]-GF3HB1L-①-②③④⑤⑥⑦-T2-⑧⑨
4	L	ICSB3[ICSPB3]-GF4HB1L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXXM-①-400-20-②-T2-⑩③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-④-T2-⑩⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-4-⑥-T2-⑩⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑩ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled CS]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/4mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HB1L

Z-axis stroke	Y-axis stroke 300-900	
	100	150
100	14.0	
150		
200		
250		
300		
350		
400		
450		
500		

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HB1L

	100-300	300-500	550-700	750-800	850-900	1,000-1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis	—					1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis	—	1200	860		695	—													
Z-axis	240					—													

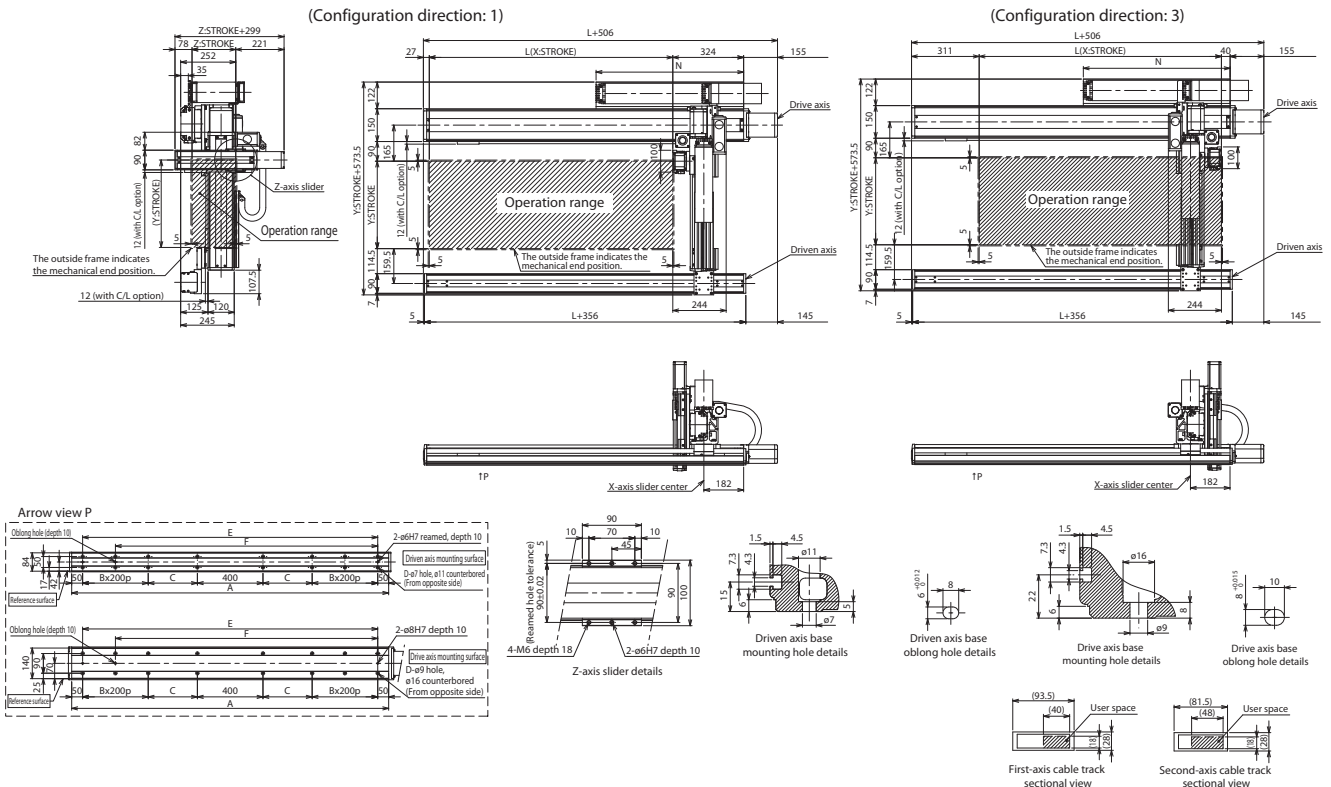
ICSB3 [ICSPB3]-GF□HB1L-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GF□HB2□

ICSPB3-GF□HB2□

High-Precision Specification



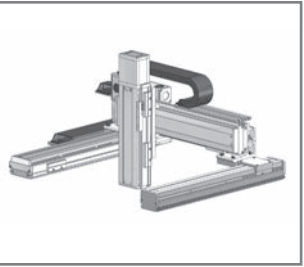
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (100W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

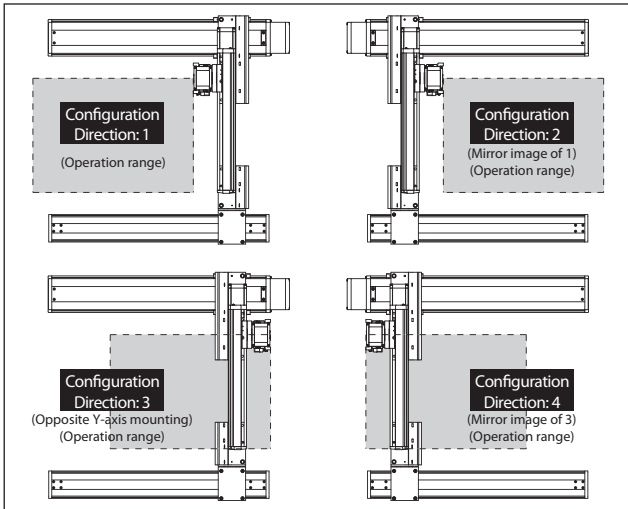
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GF1HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF1HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GF2HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF2HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GF3HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF3HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GF4HB2M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GF4HB2L- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXXM- <u>1</u> -400-20- <u>2</u> -T2- <u>1</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>3</u> -T2- <u>1</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -100- <u>6</u> - <u>6</u> -T2- <u>1</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [6] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [7] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	100W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HB2M

Z-axis stroke	Y-axis stroke 300~900	
	100	150
100	10.0	
150		
200		
250		
300		
350		
400		
450		
500		

GF□HB2L

Z-axis stroke	Y-axis stroke	Y-axis stroke				
		300~700	750	800	850	900
100	20.0		20.0	20.0	18.9	16.8
150			20.0	20.0	18.3	16.2
200			20.0	20.0	17.7	15.6
250			20.0	19.4	17.0	14.9
300			20.0	18.8	16.4	14.3
350			20.0	18.1	15.7	13.6
400			20.0	17.5	15.1	13.0
450			19.4	16.9	14.5	12.4
500			18.8	16.3	13.9	11.8

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HB2M

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	600																		

GF□HB2L

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		1200		860	695														
Z-axis	300																		

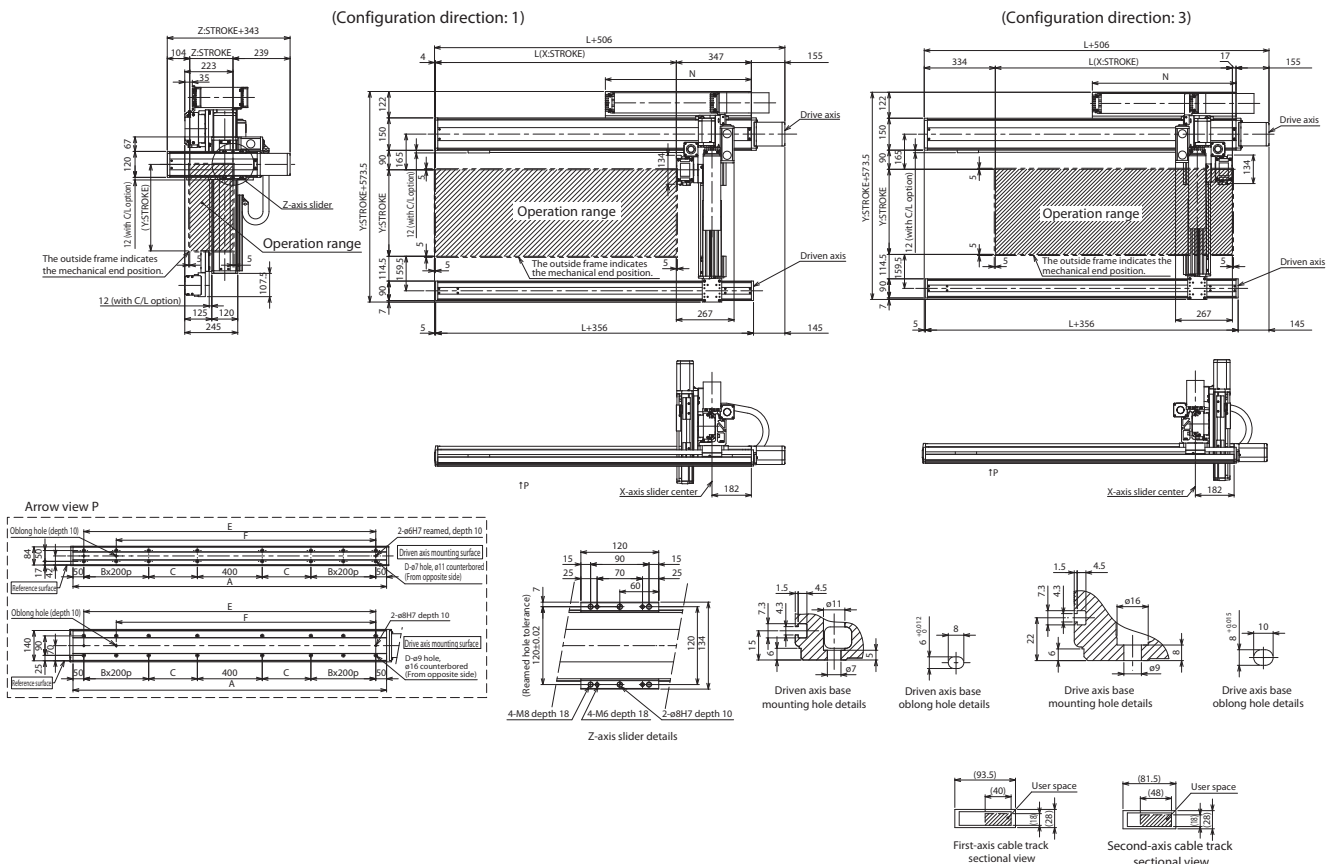
ICSB3 [ICSPB3]-GF□HB2□-CT-CT (Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	425	475	525	575	425	475	525	575
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GF□HB3□

ICSPB3-GF□HB3□

High-Precision Specification

±10µm
Standard

±5µm
High-Precision

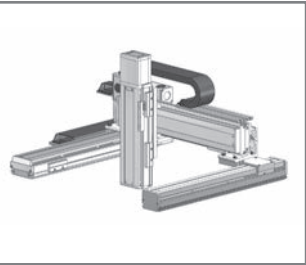
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZB (Y Side Gantry Z Base Mount)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 50: 500mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

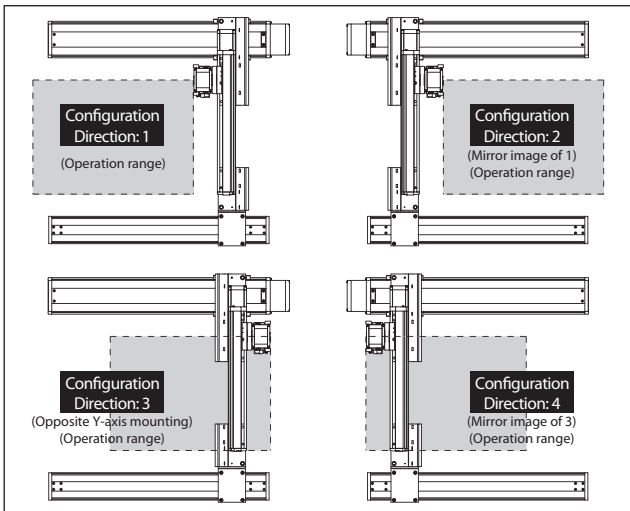
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSB3[ICSPB3]-GF1HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF1HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF1HB3L-①-②③④⑤⑥⑦-T2-⑧⑨
2	H	ICSB3[ICSPB3]-GF2HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF2HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF2HB3L-①-②③④⑤⑥⑦-T2-⑧⑨
3	H	ICSB3[ICSPB3]-GF3HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF3HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF3HB3L-①-②③④⑤⑥⑦-T2-⑧⑨
4	H	ICSB3[ICSPB3]-GF4HB3H-①-②③④⑤⑥⑦-T2-⑧⑨
	M	ICSB3[ICSPB3]-GF4HB3M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GF4HB3L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXXM-①-400-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-20-②-T2-③④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-⑤⑥-T2-③④⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑤ in the above model names.

20: For Z-axis High Speed type

10: For Z-axis Medium Speed type

5: For Z-axis Low Speed type

* Cable exit direction is specified with ③ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	CT-CT: Cable track - Cable track

Options

The option codes should be entered after the stroke for each axis.

Make sure to indicate the standard equipped option in the model number.

When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification	NM	See P.353
Guide with ball-retaining mechanism *3	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm (H), 10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HB3H

Z-axis stroke	Y-axis stroke	
	300~900	
100	10.0	
150	10.0	
200	10.0	
250	10.0	
300	10.0	
350	10.0	
400	10.0	
450	10.0	
500	10.0	

GF□HB3M

Z-axis stroke	Y-axis stroke	Y-axis stroke			
		300~700	750	800	850
100	20.0	20.0	20.0	18.4	16.3
150		20.0	20.0	17.7	15.6
200		20.0	19.5	17.1	15.0
250		20.0	18.8	16.4	14.3
300		20.0	18.2	15.8	13.7
350		20.0	17.6	15.2	13.1
400		19.5	17.0	14.6	12.5
450		18.8	16.3	13.9	11.8
500		18.2	15.7	13.3	11.2

GF□HB3L

Z-axis stroke	Y-axis stroke	Y-axis stroke												
		300	350	400	450	500	550	600	650	700	750	800	850	900
100	20.0	31.8	31.4	31.1	30.7	30.3	29.9	29.5	29.1	26.1	23.3	20.0	18.4	16.3
150		31.1	30.7	30.4	30.0	29.6	29.2	28.8	28.4	25.4	22.6	20.1	17.7	15.6
200		30.5	30.1	29.8	29.4	29.0	28.6	28.2	27.8	24.8	22.0	19.5	17.1	15.0
250		29.8	29.4	29.1	28.7	28.3	27.9	27.5	27.1	24.1	21.3	18.8	16.4	14.3
300		29.2	28.8	28.5	28.1	27.7	27.3	26.9	26.5	23.5	20.7	18.2	15.8	13.7
350		28.6	28.2	27.9	27.5	27.1	26.7	26.3	25.9	22.9	20.1	17.6	15.2	13.1
400		28.0	27.6	27.3	26.9	26.5	26.1	25.7	25.3	22.3	19.5	17.0	14.6	12.5
450		27.3	26.9	26.6	26.2	25.8	25.4	25.0	24.6	21.6	18.8	16.3	13.9	11.8
500		26.7	26.3	26.0	25.6	25.2	24.8	24.4	24.0	21.0	18.2	15.7	13.3	11.2

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HB3H

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—	—	—	—	—	1200	1150	1000	950	830	740	650	590	—	—	—	—	—	—	—
Y-axis	—	1200	—	860	695	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	1200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

GF□HB3M

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—	—	—	—	—	1200	1150	1000	950	830	740	650	590	—	—	—	—	—	—	—
Y-axis	—	1200	—	860	695	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	600	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

GF□HB3L

	100~300	300~500	550~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—	—	—	—	—	1200	1150	1000	950	830	740	650	590	—	—	—	—	—	—	—
Y-axis	—	1200	—	860	695	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Z-axis	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

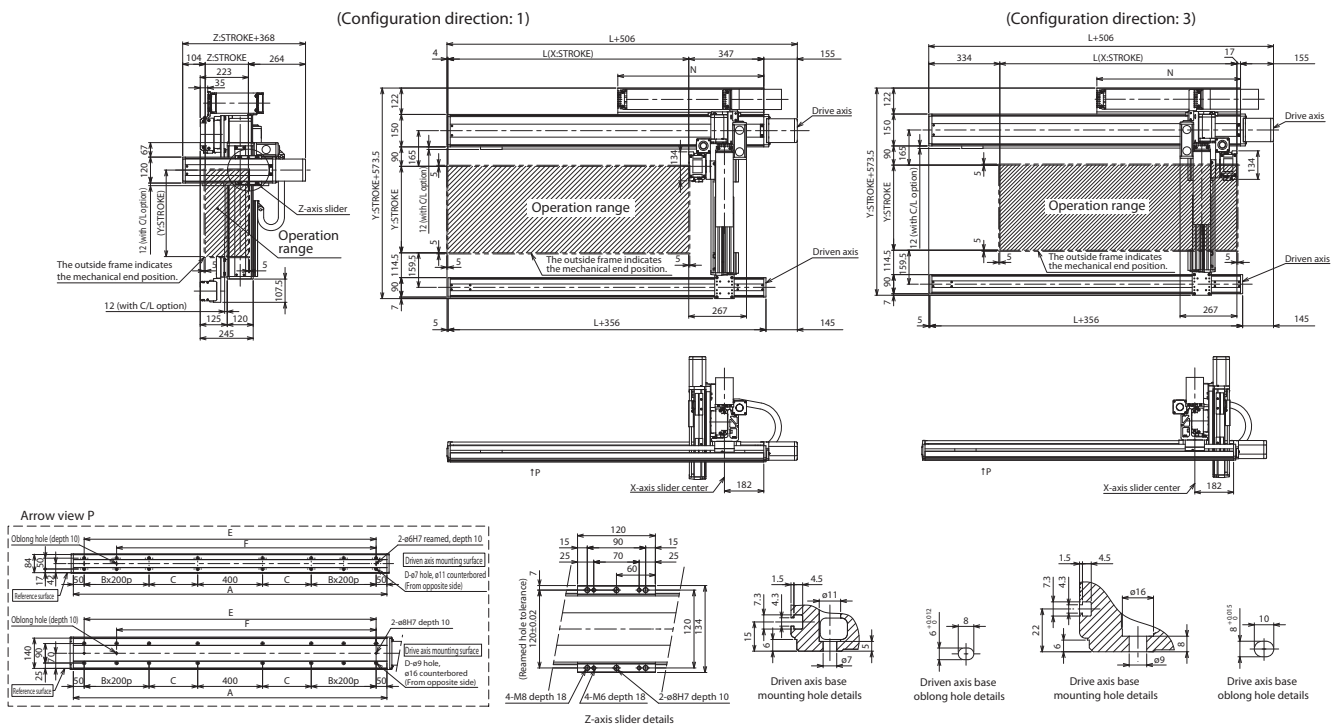
ICSB3 [ICSPB3]-GF□HB3□-CT-CT (Cable track specification)

Dimensions

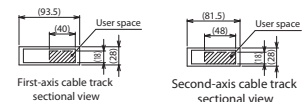
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375



ICSB3-GB□HS1□

ICSPB3-GB□HS1□

High-Precision Specification



Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Md (100W)
Y: Sml (60W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 60: 600mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification

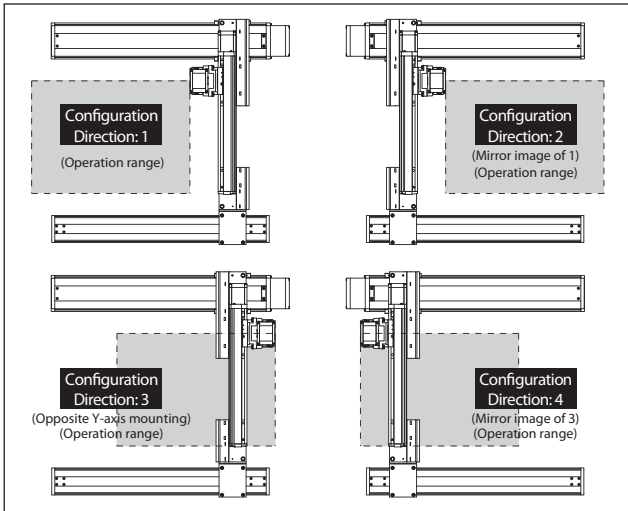
* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1HS1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GB1HS1L-①-②③④⑤⑥⑦-T2-⑧⑨
2	M	ICSB3[ICSPB3]-GB2HS1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GB2HS1L-①-②③④⑤⑥⑦-T2-⑧⑨
3	M	ICSB3[ICSPB3]-GB3HS1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GB3HS1L-①-②③④⑤⑥⑦-T2-⑧⑨
4	M	ICSB3[ICSPB3]-GB4HS1M-①-②③④⑤⑥⑦-T2-⑧⑨
	L	ICSB3[ICSPB3]-GB4HS1L-①-②③④⑤⑥⑦-T2-⑧⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-20-②-T2-③④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-SXM-①-60-16-④-T2-⑤⑥	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑩-⑥-T2-⑦⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Lead is specified with ⑩ in the above model names.

8: For Z-axis Medium Speed type

4: For Z-axis Low Speed type

* Cable exit direction is specified with ④ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in alphabetical order.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/20mm
Y-axis motor output/lead	60W/16mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□HS1M

Z-axis stroke	Y-axis stroke 300-600	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	

■GB□HS1L

Z-axis stroke	Y-axis stroke						
	300	350	400	450	500	550	600
100	8.0	7.9	7.6	7.2	6.9	6.5	6.2
150	7.6	7.6	7.3	6.9	6.6	6.1	5.8
200	7.2	7.2	6.9	6.5	6.2	5.8	5.5
250	6.9	6.9	6.6	6.1	5.8	5.4	5.1
300	6.6	6.6	6.3	5.9	5.6	5.2	4.8

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□HS1M

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	1200			860	695	570
Y-axis	—	960				
Z-axis	480					

■GB□HS1L

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	1200			860	695	570
Y-axis	—	960				
Z-axis	240					

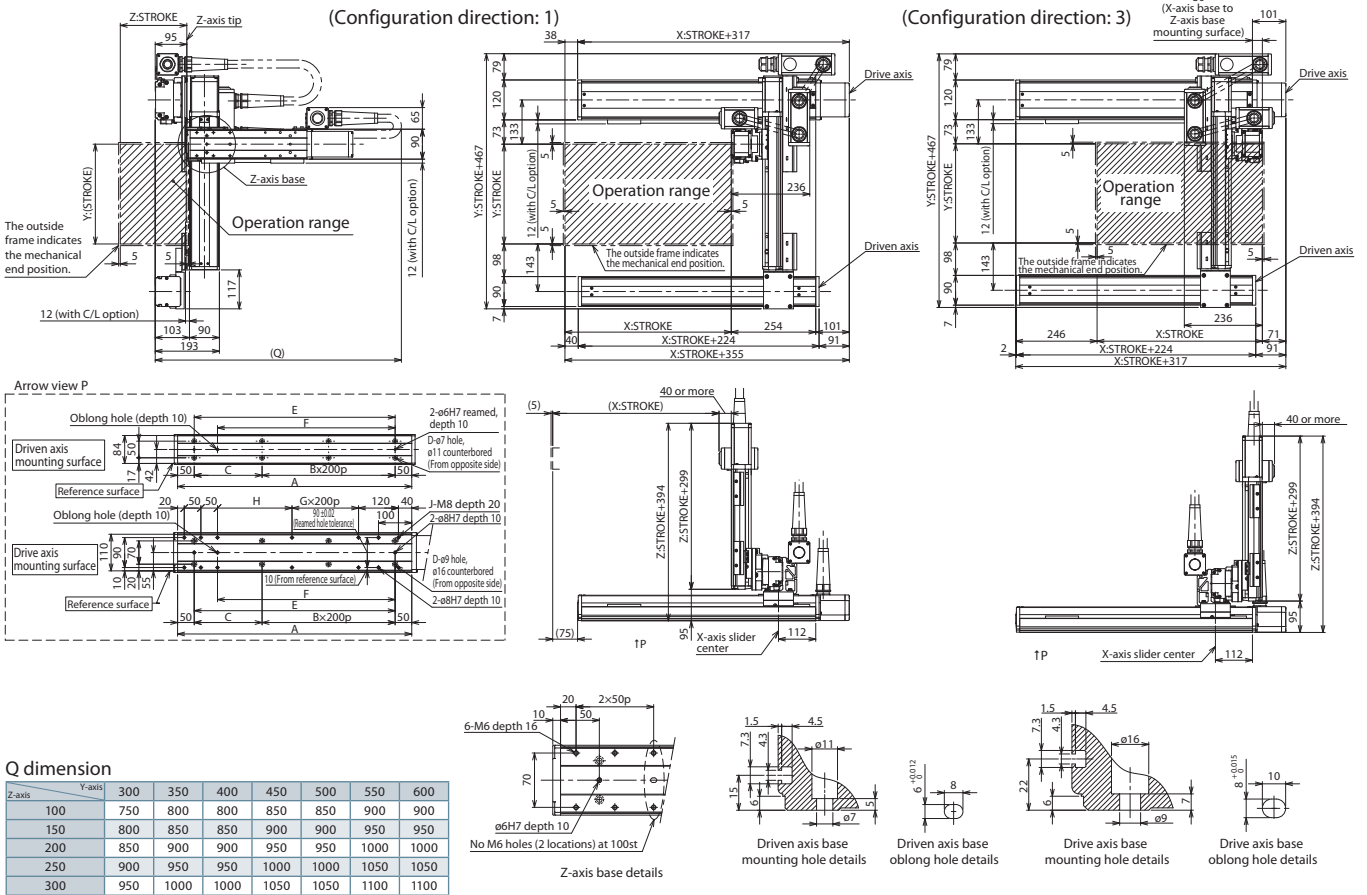
ICSB3 [ICSPB3]-GB□HS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600
100	750	800	800	850	850	900	900	
150	800	850	850	900	900	950	950	
200	850	900	900	950	950	1000	1000	
250	900	950	950	1000	1000	1050	1050	
300	950	1000	1000	1050	1050	1100	1100	

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GB□MS1□

ICSPB3-GB□MS1□

High-Precision Specification



Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Md (100W)
Y: 5ml (60W)
Z: 5ml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 60: 600mm (Every 50mm)	10: 100mm 30: 300mm (Every 50mm)	T2: SCOM XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

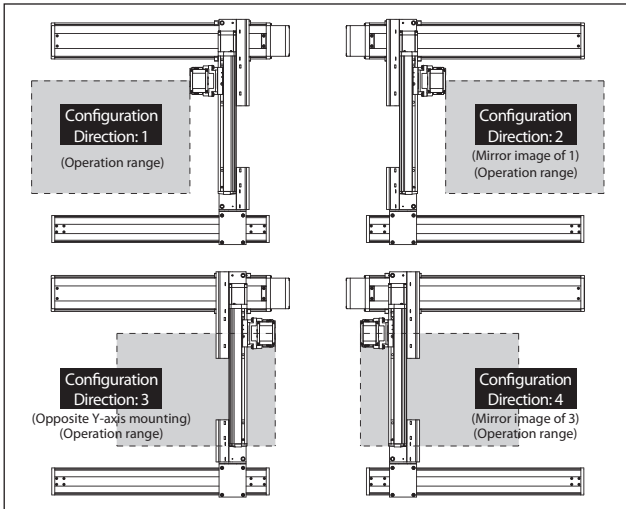
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GB1MS1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB1MS1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GB2MS1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB2MS1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GB3MS1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB3MS1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GB4MS1M- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>
	L	ICSB3[ICSPB3]-GB4MS1L- <u>1</u> - <u>2</u> <u>3</u> - <u>4</u> <u>5</u> - <u>6</u> <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -100-10- <u>2</u> -T2- <u>1</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-SXM- <u>1</u> -60-8- <u>4</u> -T2- <u>1</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>6</u> - <u>6</u> -T2- <u>1</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [5] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [1] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 60: 600mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 30: 300mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	60W/8mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GB□MS1M

		Y-axis stroke 300-600
Z-axis stroke	100	4.3
	150	3.9
	200	3.5
	250	3.1
	300	2.8

■GB□MS1L

		Y-axis stroke 300-600
Z-axis stroke	100	11.3
	150	10.9
	200	10.5
	250	10.1
	300	9.8

Maximum Speed by Stroke (mm/s) (Note 4)

■GB□MS1M

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	600			430	345	280
Y-axis	—	480				
Z-axis	480					

■GB□MS1L

	100-300	300-600	650-700	750-800	850-900	950-1000
X-axis	600			430	345	280
Y-axis	—	480				
Z-axis	240					

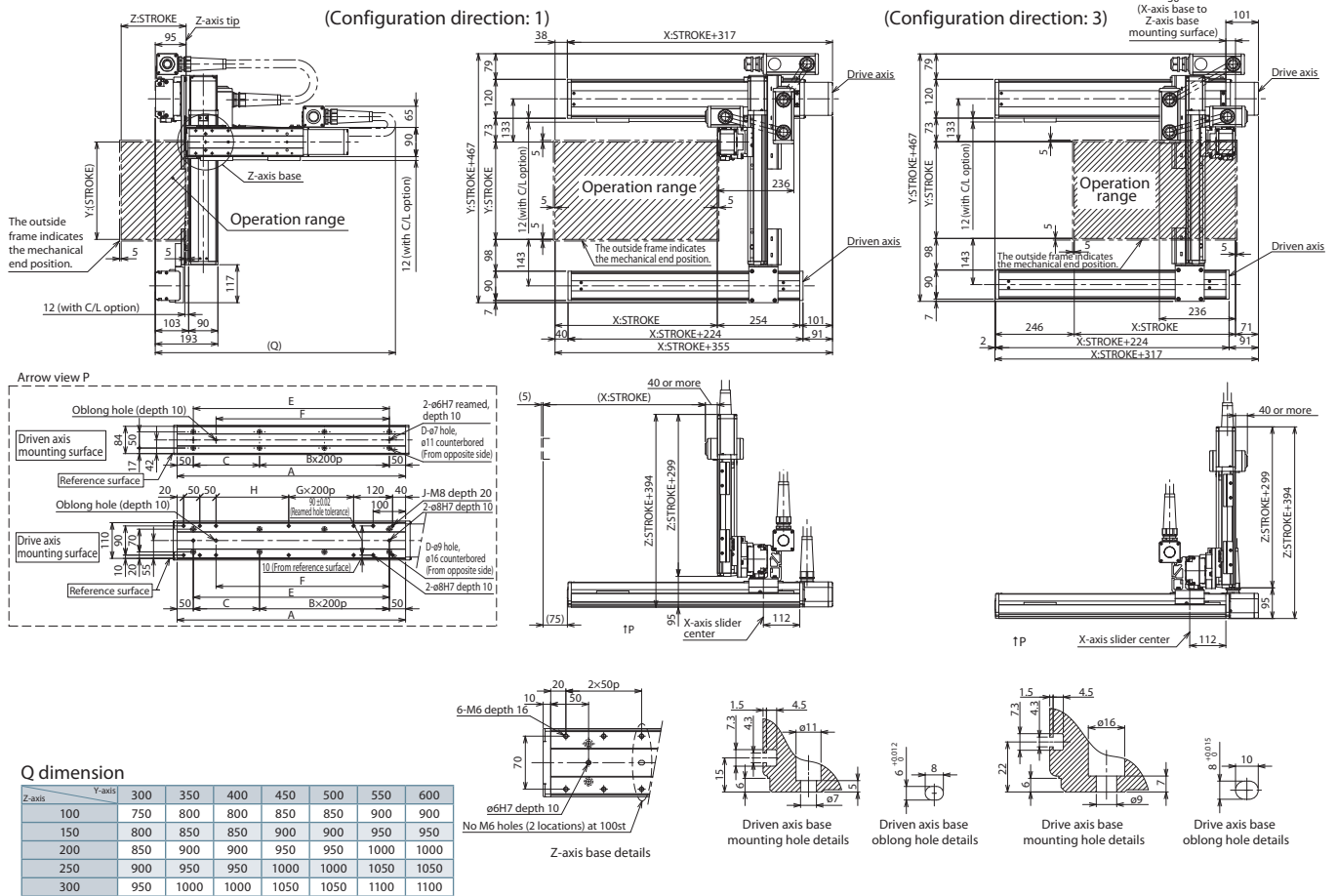
ICSB3 [ICSPB3]-GB□MS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□HS1□

ICSPB3-GC□HS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Sml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCOM SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

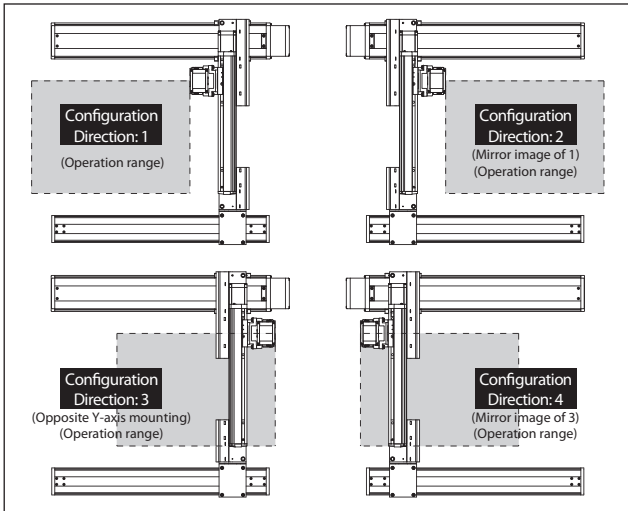
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4HS1M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4HS1L-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-200-20-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-20-③-T2-④-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑥-⑦-T2-⑧-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑤ in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ⑧ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis-Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□HS1M

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

■GC□HS1L

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□HS1M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	1200					
Z-axis	480					

■GC□HS1L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	1200					
Z-axis	240					

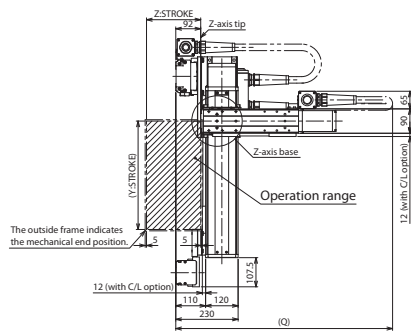
ICSB3 [ICSPB3]-GC□HS1-SC-SC□ (Self-standing cable specification)

Dimensions

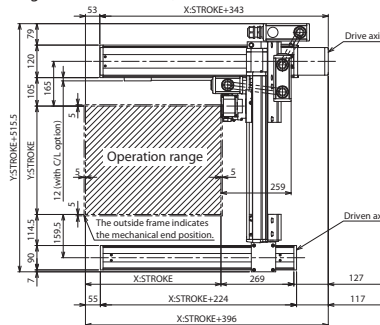
CAD drawings can be downloaded from our website.



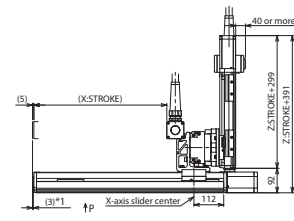
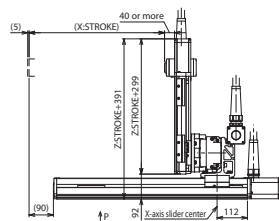
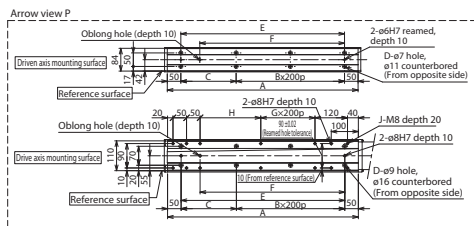
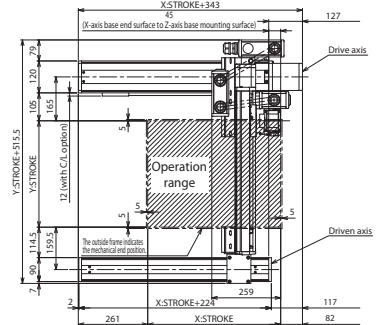
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



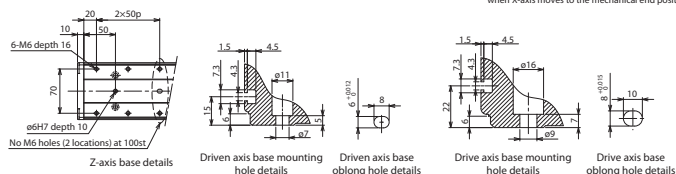
(Configuration direction: 1)



(Configuration direction: 3)



*1 Amount of Y-axis connector box protrusion when X-axis moves to the mechanical end position



Q dimension

Z-axis	Y-axis									
	300	350	400	450	500	550	600	650	700	
100	800	800	800	850	850	900	900	950	950	
150	850	850	850	900	900	950	950	1000	1000	
200	900	900	900	950	950	1000	1000	1050	1050	
250	950	950	950	1000	1000	1050	1050	1100	1100	
300	1000	1000	1000	1050	1050	1100	1100	1150	1150	
350	1050	1050	1050	1100	1100	1150	1150	1200	1200	
400	1100	1100	1100	1150	1150	1200	1200	1250	1250	

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□HS3M

ICSPB3-GC□HS3M High-Precision Specification



Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

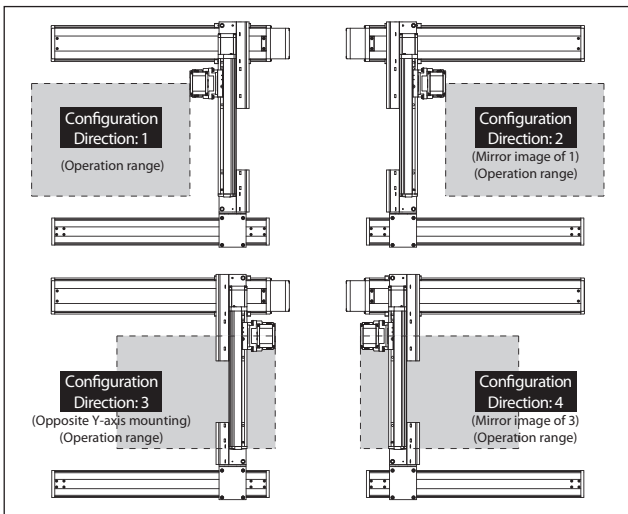
Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

Model Specification * Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GC1HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
2	M	ICSB3[ICSPB3]-GC2HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
3	M	ICSB3[ICSPB3]-GC3HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>
4	M	ICSB3[ICSPB3]-GC4HS3M- <u>1</u> - <u>2</u> - <u>3</u> - <u>4</u> - <u>5</u> - <u>6</u> - <u>7</u> -T2- <u>8</u> - <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>2</u> -T2- <u>10</u> - <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -100-20- <u>4</u> -T2- <u>10</u> - <u>5</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM- <u>1</u> -200-10- <u>6</u> -T2- <u>10</u> - <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [10] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.
When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ GC□HS3M

Z-axis stroke	Y-axis stroke								
	300	350	400	450	500	550	600	650	700
100	13.1	13.1	13.1	13.0	13.0	13.0	13.0	12.9	11.9
150	12.5	12.4	12.4	12.4	12.4	12.4	12.3	12.3	11.2
200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6
250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9
300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3
350	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	8.7
400	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.3	8.1

Maximum Speed by Stroke (mm/s) (Note 4)

■ GC□HS3M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200			860	695	570
Y-axis	—					
Z-axis	600		—			

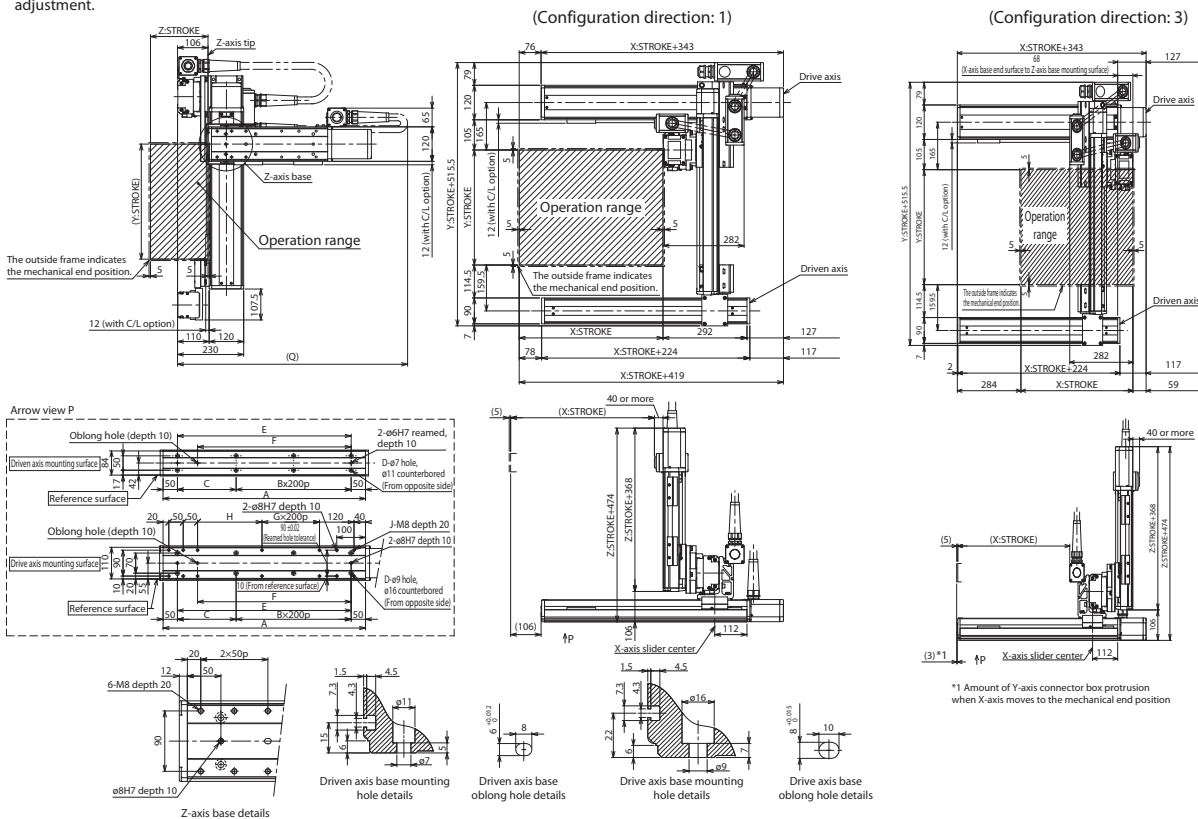
ICSB3 [ICSPB3]-GC□HS3M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis								
	300	350	400	450	500	550	600	650	700
100	850	850	900	900	950	950	1000	1000	1000
150	900	900	950	950	1000	1000	1050	1050	1050
200	950	950	1000	1000	1050	1050	1100	1100	1100
250	1000	1000	1050	1050	1100	1100	1150	1150	1150
300	1050	1050	1100	1100	1150	1150	1200	1200	1200
350	1100	1100	1150	1150	1200	1200	1250	1250	1250
400	1150	1150	1200	1200	1250	1250	1300	1300	1300

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104	154	204	254	104
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	2	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	124	174	224	274	124	174	224	274	124	174	224	274	124
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□MS1□

ICSPB3-GC□MS1□

High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: SmI (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

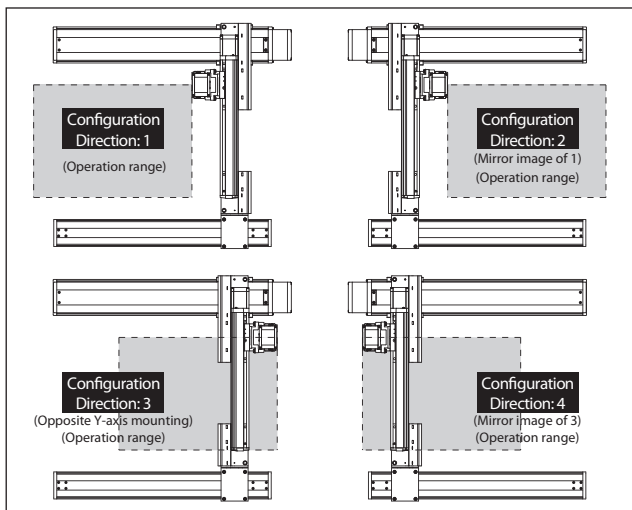
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GC1MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC1MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC2MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC3MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4MS1M-①-②③④⑤⑥⑦-T2-⑧-⑨
	L	ICSB3[ICSPB3]-GC4MS1L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-①-60-⑤⑥-T2-⑦-⑧	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑧ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑤ in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with ⑧ in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GC□MS1M

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

GC□MS1L

Z-axis stroke	Y-axis stroke 300~700	
	100	150
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GC□MS1M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600			430	345	280
Y-axis	—	600		—		
Z-axis	480			—		

GC□MS1L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600			430	345	280
Y-axis	—	600		—		
Z-axis	240			—		

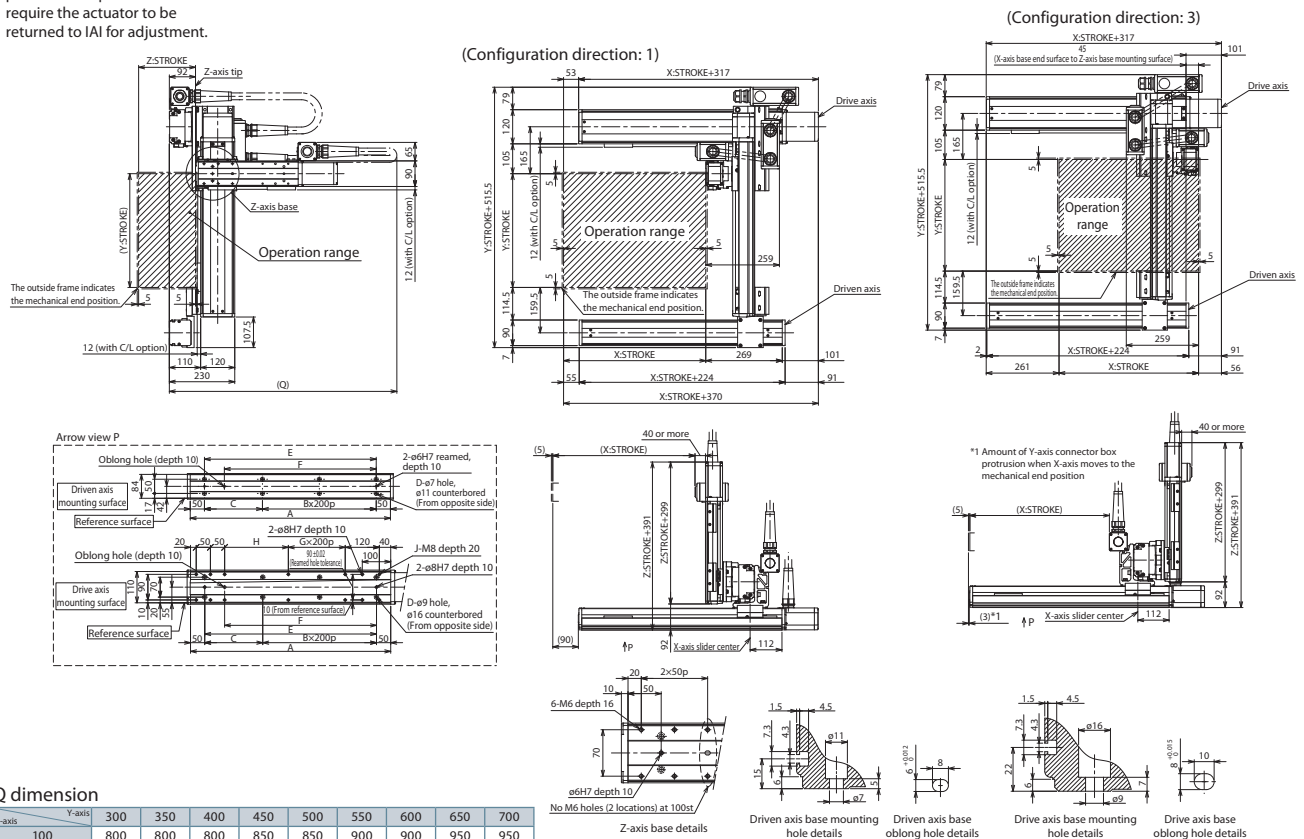
ICSB3 [ICSPB3]-GC□MS1□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700
100	800	800	800	850	850	900	900	950	950	950
150	850	850	850	900	900	950	950	1000	1000	1000
200	900	900	900	950	950	1000	1000	1050	1050	1050
250	950	950	950	1000	1000	1050	1050	1100	1100	1100
300	1000	1000	1000	1050	1050	1100	1100	1150	1150	1150
350	1050	1050	1050	1100	1100	1150	1150	1200	1200	1200
400	1100	1100	1100	1150	1150	1200	1200	1250	1250	1250

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GC□MS3M

ICSPB3-GC□MS3M High-Precision Specification

±10μm Standard

±5μm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Md (100W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

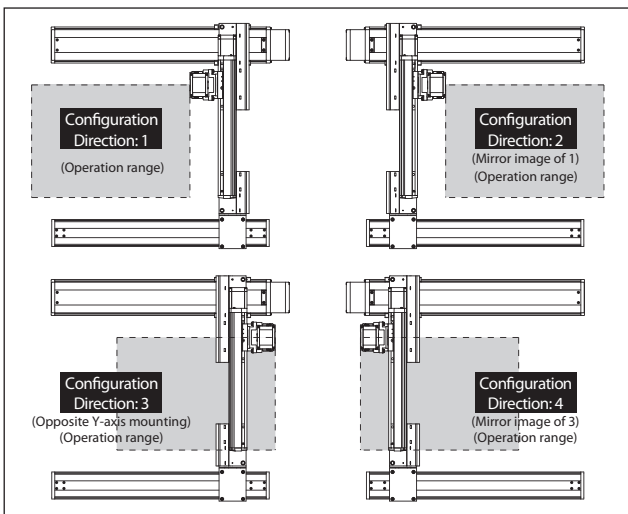
Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 100: 1000mm (Every 50mm)	Y-axis Stroke/Option	30: 300mm 70: 700mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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Model Specification * Items in brackets [] are for the High-Precision Specification.

XY Configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GC1MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
2	M	ICSB3[ICSPB3]-GC2MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
3	M	ICSB3[ICSPB3]-GC3MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
4	M	ICSB3[ICSPB3]-GC4MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration * Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-①-100-10-②-T2-③-④	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM01-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-100-10-④-T2-③-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-10-⑥-T2-③-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol. Please refer to P.11 for the cable exit direction of each axis.

Common Specifications * Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	100W/10mm
Y-axis motor output/lead	100W/10mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.
- (Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GC□MS3M

Z-axis stroke	Y-axis stroke						
	300~400	450	500	550	600	650	700
100	14.3	14.3	14.3	14.3	14.3	14.0	11.9
150	13.6	13.6	13.6	13.6	13.6	13.3	11.2
200	13.0	13.0	13.0	13.0	13.0	12.7	10.6
250	12.3	12.3	12.3	12.3	12.3	12.0	9.9
300	11.7	11.7	11.7	11.7	11.7	11.4	9.3
350	11.1	11.1	11.1	10.9	10.9	10.3	8.7
400	10.5	10.4	10.1	9.8	9.6	9.3	8.1

Maximum Speed by Stroke (mm/s) (Note 4)

■GC□MS3M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	600			430	345	280
Y-axis	—	600		—		
Z-axis	600		—			

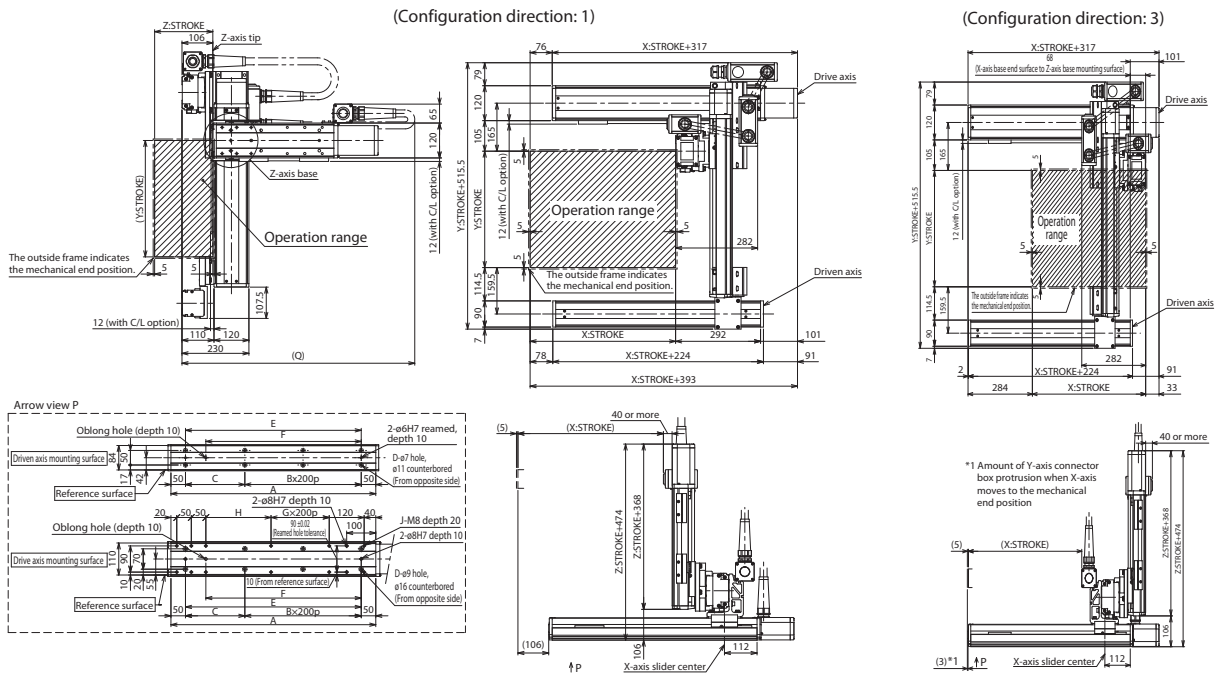
ICSB3 [ICSPB3]-GC□MS3M-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.

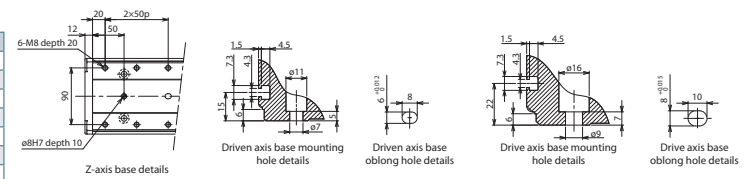


* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



Q dimension

Z-axis	Y-axis								
	300	350	400	450	500	550	600	650	700
100	850	850	900	900	950	950	1000	1000	1000
150	900	900	950	950	1000	1000	1050	1050	1050
200	950	950	1000	1000	1050	1050	1100	1100	1100
250	1000	1000	1050	1050	1100	1100	1150	1150	1150
300	1050	1050	1100	1100	1150	1150	1200	1200	1200
350	1100	1100	1150	1150	1200	1200	1250	1250	1250
400	1150	1150	1200	1200	1250	1250	1300	1300	1300



X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104	1154	1204
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
D	4	4	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	12	14
E	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954	1004	1054	1104
F	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984	1034
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18

ICSB3-GD HS1

ICSPB3-GD HS1 High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: SmI (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	30: 300mm 70: 700mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

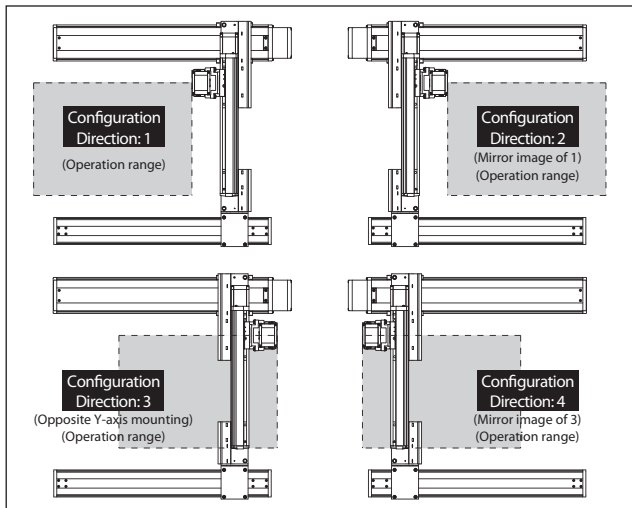
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GD1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GD2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GD3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GD4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GD4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXMX-[1]-200-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[3]-[6]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [6] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [1] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	80: 800mm 200: 2000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HS1M

Z-axis stroke	Y-axis stroke 300~700	
	100	4.3
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

GD□HS1L

Z-axis stroke	Y-axis stroke 300~700	
	100	11.3
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HS1M

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	480	—	—	—	—	—	—	—	—	—	—	—	—

GD□HS1L

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	—	—	—	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	—	—	1200	—	—	—	—	—	—	—	—	—	—
Z-axis	240	—	—	—	—	—	—	—	—	—	—	—	—

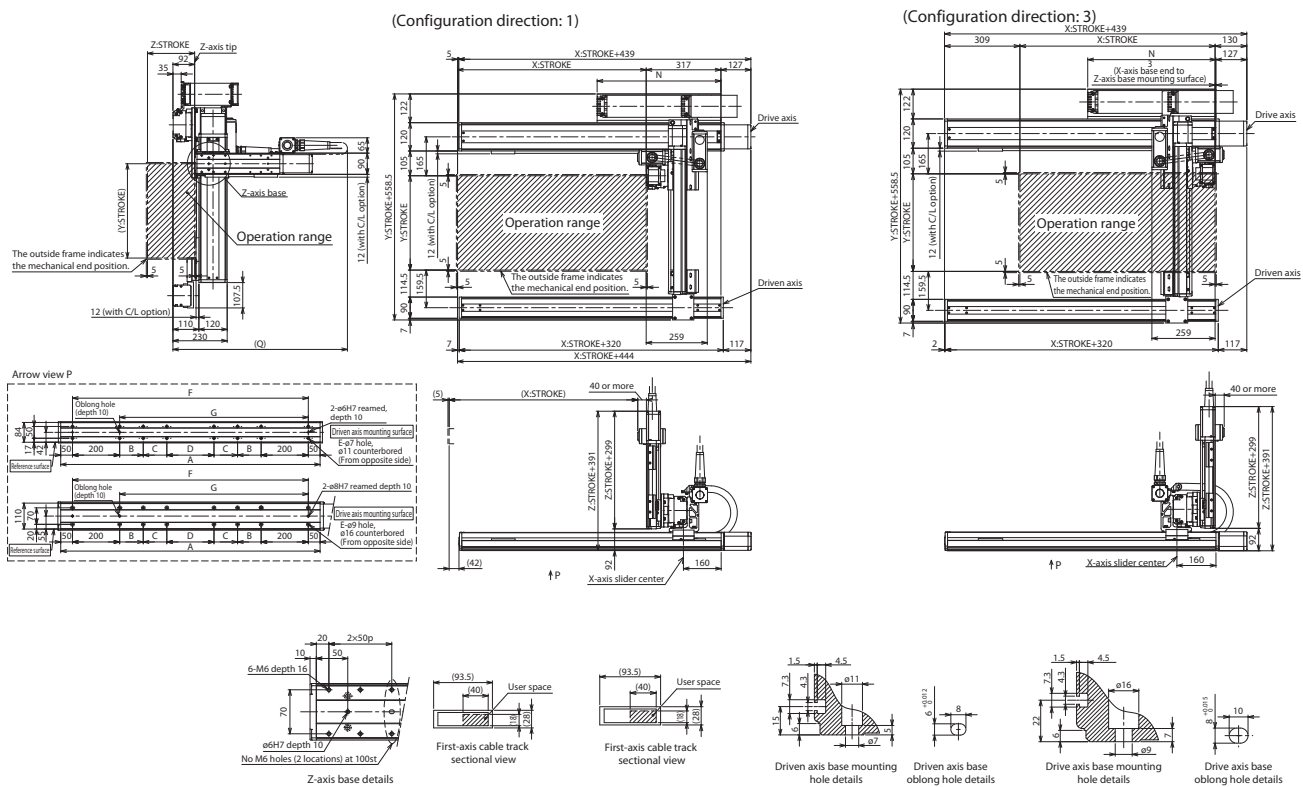
ICSB3 [ICSPB3]-GD□HS1□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

Q dimension

Z-axis	Y-axis												
	300	350	400	450	500	550	600	650	700				
100	800	800	800	850	850	900	900	950	950	1000	1000	1000	1000
150	850	850	850	900	900	950	950	1000	1000	1050	1050	1050	1050
200	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1100	1100
250	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1150	1150
300	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1200	1200
350	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1250	1250
400	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1300	1300

ICSB3-GD HS3M

ICSPB3-GD HS3M High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Md (200W)
Y: Md (100W)
Z: Md (200W)



Model Specification Items

Series	GD HS3M	Type	WA	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification		Refer to Model Specification table below	WA: Battery-less Absolute	80: 800mm 200: 2000mm (Every 100mm)	Refer to Options table below	30: 300mm 70: 700mm (Every 50mm)	Refer to Options table below	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

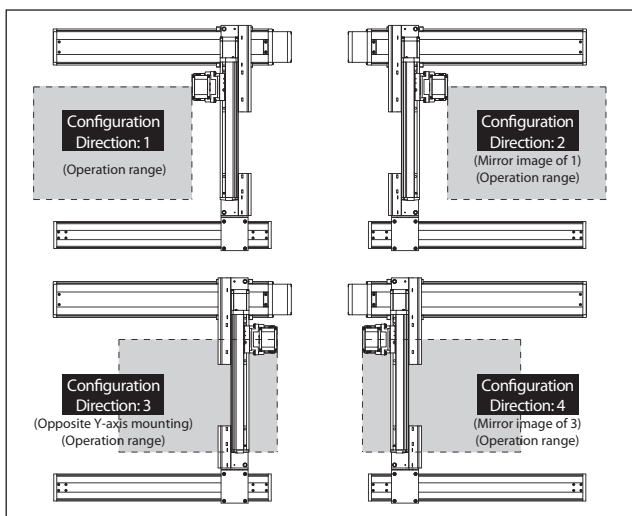
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSB3[ICSPB3]-GD1HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GD2HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GD3HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GD4HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM02-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-100-20-[4]-T2-[5]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-10-[6]-T2-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with [8] in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	80: 800mm ? 200: 2000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm ? 70: 700mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm ? 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/20mm
Y-axis motor output/lead	100W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters.

The maximum length is 15m.

(Note 3) The rated acceleration is 0.4G. The payload is based on operation at the rated acceleration.

When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GD□HS3M

Z-axis stroke	Y-axis stroke									
	300	350	400	450	500	550	600	650	700	
100	13.1	13.1	13.1	13.0	13.0	13.0	13.0	12.9	11.9	
150	12.5	12.4	12.4	12.4	12.4	12.4	12.3	12.3	11.2	
200	11.9	11.9	11.9	11.9	11.8	11.8	11.8	11.8	10.6	
250	11.3	11.3	11.3	11.2	11.2	11.2	11.2	11.1	9.9	
300	10.8	10.7	10.7	10.7	10.7	10.6	10.6	10.6	9.3	
350	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.1	8.7	
400	9.7	9.7	9.6	9.6	9.6	9.6	9.5	9.3	8.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GD□HS3M

	100~300	300~400	450~700	800~1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
X-axis	-	-	-	1200	1100	1000	950	800	700	600	550	500	450
Y-axis	-	1200	-	-	-	-	-	-	-	-	-	-	-
Z-axis	600	-	-	-	-	-	-	-	-	-	-	-	-

ICSB3 [ICSPB3]-GD□HS3M-CT-SC (Cable track - Self-standing cable specification)

Dimensions

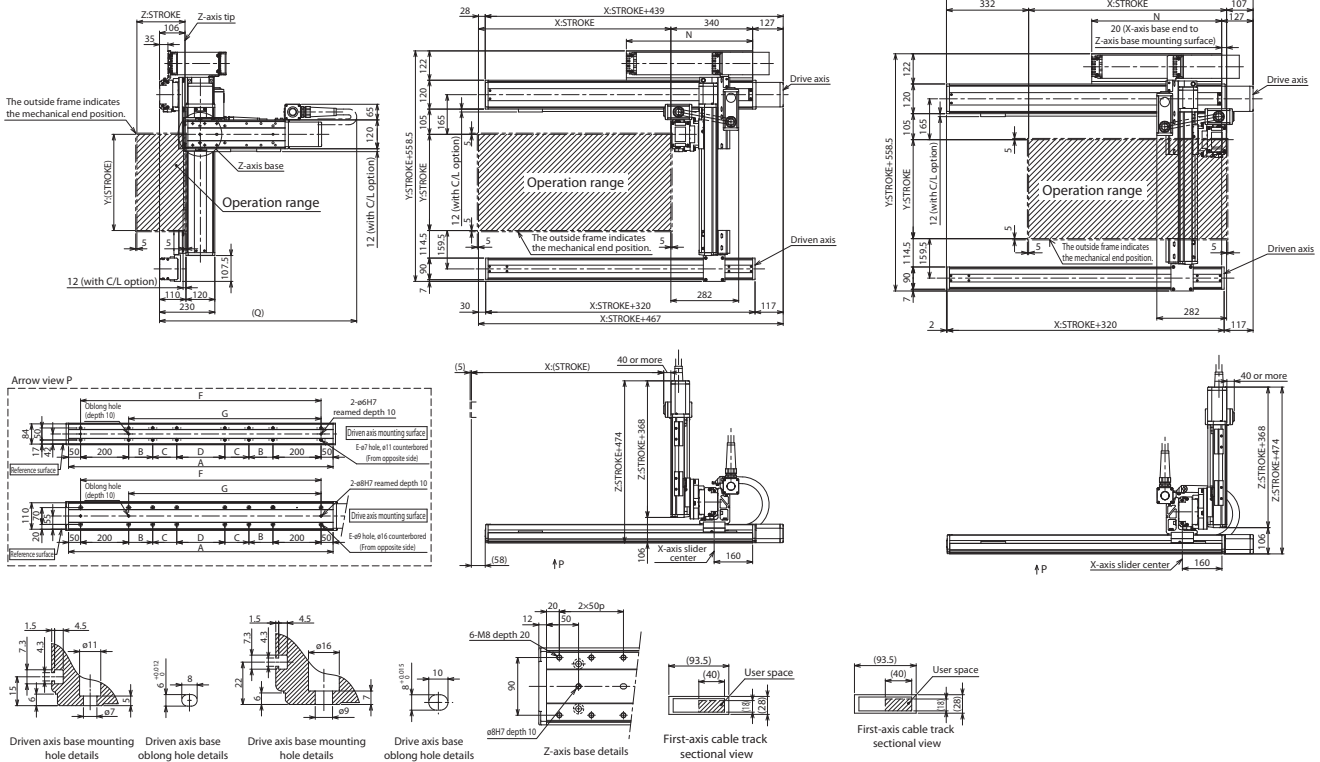
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



X-axis stroke	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
A	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
B	200	200	200	250	300	350	400	450	500	550	200	200	200
C	0	0	0	0	0	0	0	0	0	0	400	450	500
D	200	300	400	400	400	400	400	400	400	400	400	400	400
E	12	12	12	12	12	12	12	12	12	12	16	16	16
F	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
G	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
N	525	575	625	675	725	775	825	875	925	975	1025	1075	1125

Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700
100	850	850	900	900	950	950	1000	1000	1000	1000
150	900	900	950	950	1000	1000	1000	1050	1050	1050
200	950	950	1000	1000	1050	1050	1100	1100	1100	1100
250	1000	1000	1050	1050	1100	1100	1100	1150	1150	1150
300	1050	1050	1100	1100	1150	1150	1200	1200	1200	1200
350	1100	1100	1150	1150	1200	1200	1250	1250	1250	1250
400	1150	1150	1200	1200	1250	1250	1300	1300	1300	1300

ICSB3-GE□HS1□

ICSPB3-GE□HS1□ High-Precision Specification

±10µm Standard

±5µm High-Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: 5ml (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

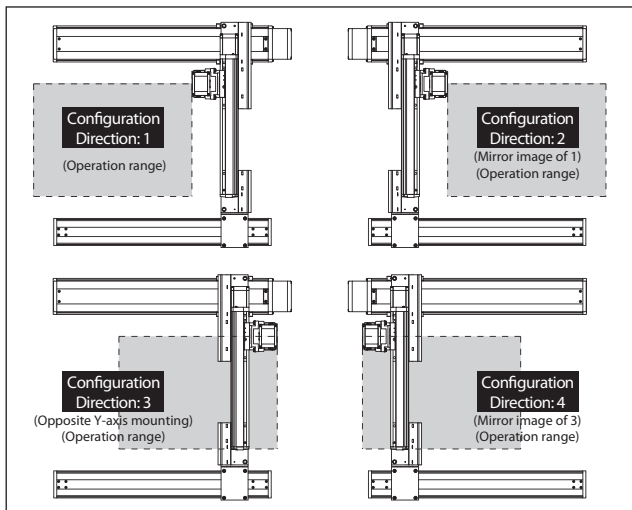
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE1HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GE2HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE2HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GE3HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE3HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GE4HS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE4HS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[3]-[4]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[2]-[3]-T2-[4]-[5]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [5] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [7] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01 mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■ GE□HS1M		Y-axis stroke
		300~900
Z-axis stroke	100	4.3
	150	3.9
	200	3.5
	250	3.1
	300	2.8
	350	2.4
	400	2.1

■ GE□HS1L		Y-axis stroke
		300~900
Z-axis stroke	100	11.3
	150	10.9
	200	10.5
	250	10.1
	300	9.8
	350	9.4
	400	9.1

Maximum Speed by Stroke (mm/s) (Note 4)

■ GE□HS1M						
	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	—	1200	860	695	695	—
Z-axis	480	—				

■ GE□HS1L						
	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	—	1200	860	695	695	—
Z-axis	240	—				

ICSB3 [ICSPB3]-GE□HS1□-SC-SC (Self-standing cable specification)

Dimensions

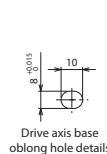
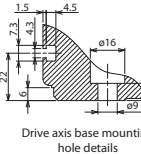
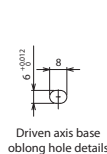
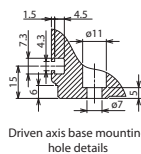
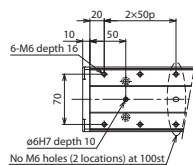
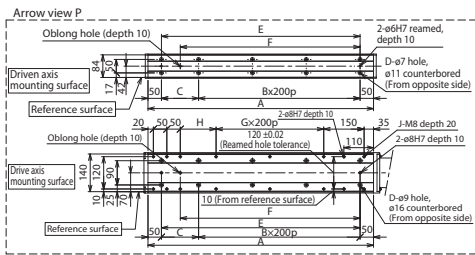
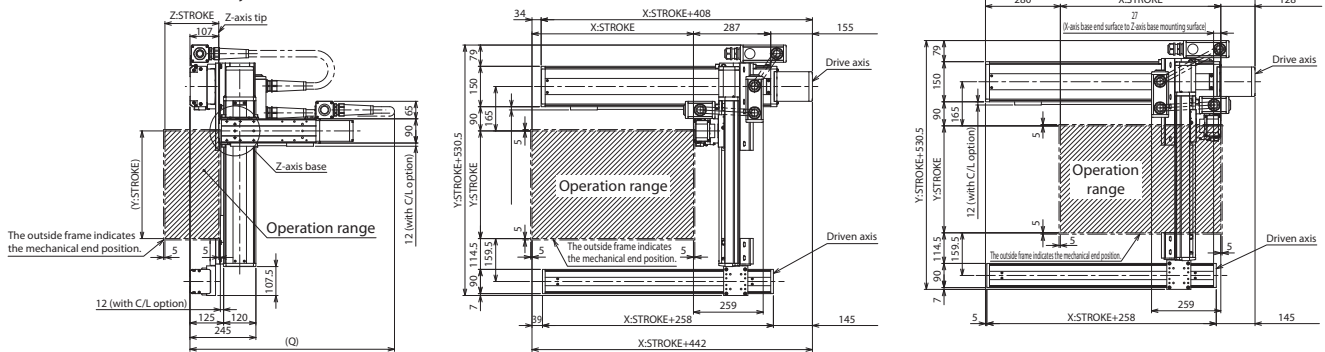
CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



Q dimension

Z-axis	Y-axis																
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
100	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150
150	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200
200	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250
250	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300
300	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350
350	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400
400	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20

ICSB3-GE□HS3□

ICSPB3-GE□HS3□

High-Precision Specification



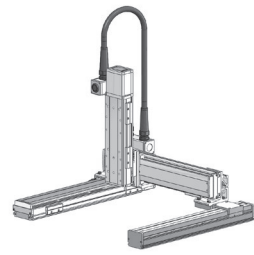
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Type	Refer to Model Specification table below	Encoder Type	WA: Battery-less Absolute	X-axis Stroke/Option	10: 100mm 100: 1000mm (Every 50mm)	Y-axis Stroke/Option	30: 300mm 90: 900mm (Every 50mm)	Z-axis Stroke/Option	10: 100mm 40: 400mm (Every 50mm)	Applicable Controllers	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	Cable Length	3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management	Refer to Explanation of Model Designations below
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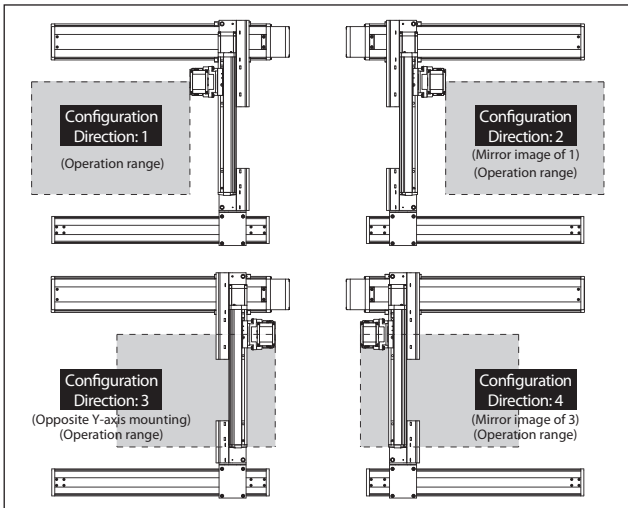
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE1HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GE2HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE2HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GE3HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE3HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GE4HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE4HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-400-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[2]-[3]-T2-[1]-[2]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [2] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type
* Cable exit direction is specified with [1] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? : 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

Z-axis stroke	Y-axis stroke	
	300~900	300~900
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	

Z-axis stroke	Y-axis stroke													
	300	350	400	450	500	550	600	650	700	750	800	850	900	
100	32.9	32.9	32.9	32.8	32.8	32.8	32.8	29.7	26.7	23.9	21.4	19.0	16.9	
150	32.3	32.2	32.2	32.2	32.2	32.2	32.1	29.0	26.0	23.2	20.7	18.3	16.2	
200	31.7	31.7	31.7	31.7	31.5	31.1	30.7	28.4	25.4	22.6	20.1	17.7	15.6	
250	29.7	29.4	29.0	28.7	28.3	27.9	27.6	27.3	24.7	21.9	19.4	17.0	14.9	
300	27.0	26.7	26.4	26.0	25.7	25.4	25.1	24.8	24.1	21.3	18.8	16.4	14.3	
350	24.7	24.4	24.1	23.8	23.5	23.2	22.9	22.6	22.3	20.7	18.2	15.8	13.7	
400	22.6	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.4	20.1	17.6	15.2	13.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GE□HS3M	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	—	1200	860	695	—	—
Z-axis	600					

GE□HS3L	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	1200					
Y-axis	—	1200	860	695	—	—
Z-axis	300					

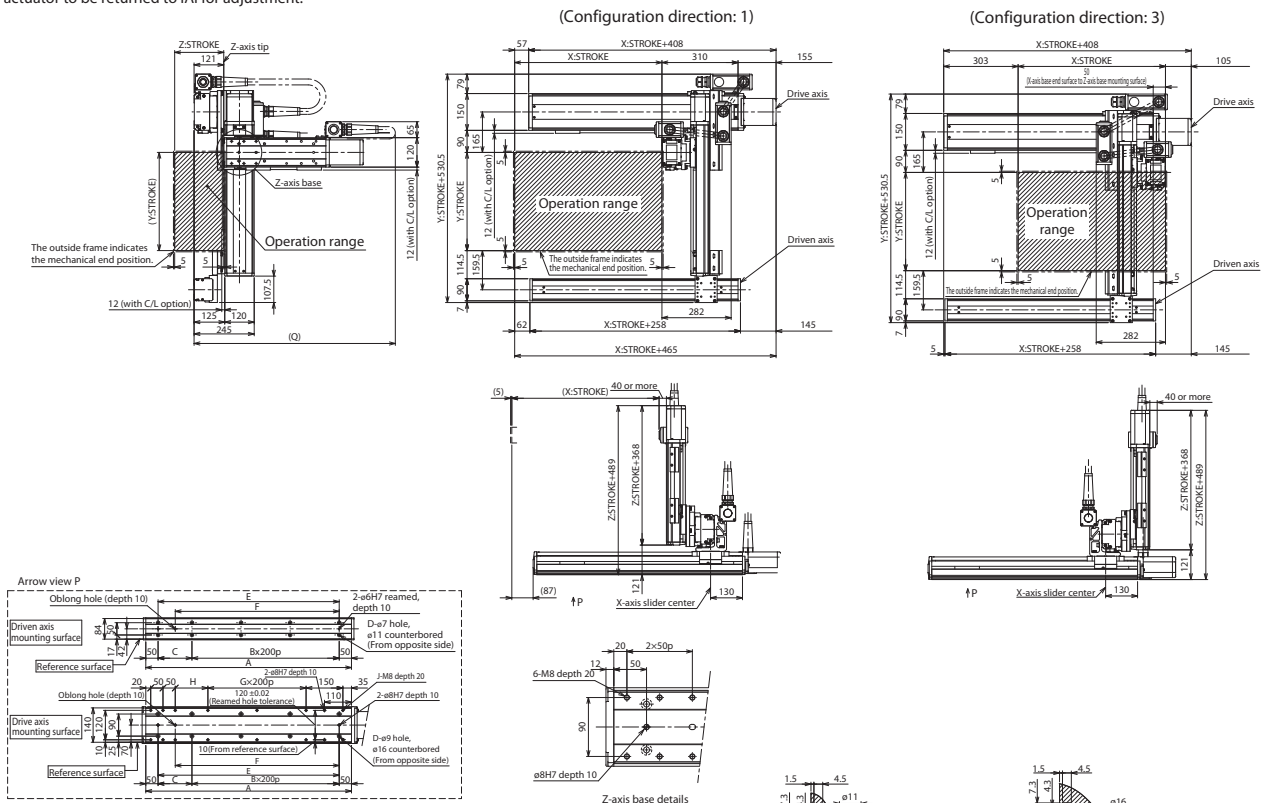
ICSB3 [ICSPB3]-GE□HS3□-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



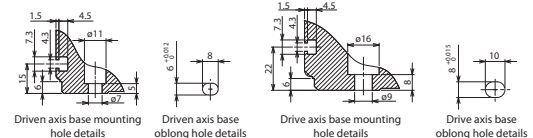
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100	850	900	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1150
150	900	950	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1200
200	950	1000	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1250
250	1000	1050	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1300
300	1050	1100	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1350
350	1100	1150	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350	1400
400	1150	1200	1200	1200	1250	1250	1300	1300	1300	1350	1350	1400	1400	1450

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18



ICSB3-GE□MS1□

ICSPB3-GE□MS1□ High-Precision Specification



Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Lg (200W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis - Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	10: 100mm 100: 1000mm (Every 50mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

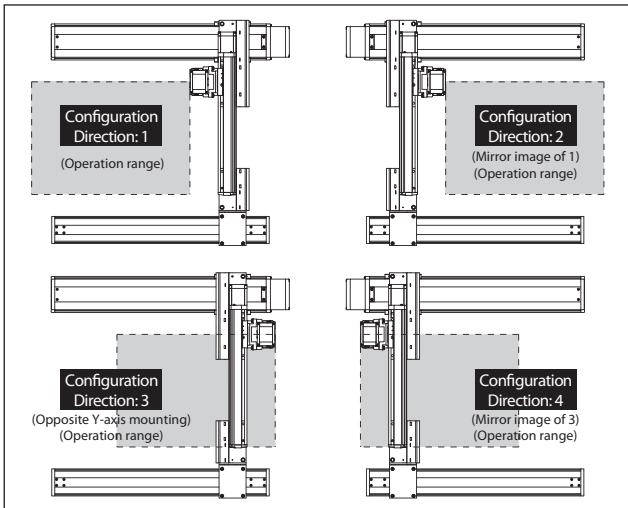
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GE1MS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE1MS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GE2MS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE2MS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GE3MS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE3MS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GE4MS1M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GE4MS1L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-[1]-200-10-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-10-[2]-T2-[1]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM-[1]-60-[2]-[3]-T2-[1]-[2]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [3] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [2] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	10: 100mm 100: 1000mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 Cannot be selected for High-Precision Specification.
* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/10mm
Y-axis motor output/lead	200W/10mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

■GE□MS1M

Z-axis stroke	Y-axis stroke 300~900	
	100	150
100	4.3	3.9
150	3.5	3.1
200	2.8	2.4
250	2.4	2.1
300	—	—
350	—	—
400	—	—

■GE□MS1L

Z-axis stroke	Y-axis stroke 300~900	
	100	150
100	11.3	10.9
150	10.5	10.1
200	9.8	9.4
250	9.4	9.1
300	—	—
350	—	—
400	—	—

Maximum Speed by Stroke (mm/s) (Note 4)

■GE□MS1M

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	—	600	—	460	380	—
Y-axis	—	600	430	—	—	—
Z-axis	480	—	—	—	—	—

■GE□MS1L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis	—	600	—	460	380	—
Y-axis	—	600	430	—	—	—
Z-axis	240	—	—	—	—	—

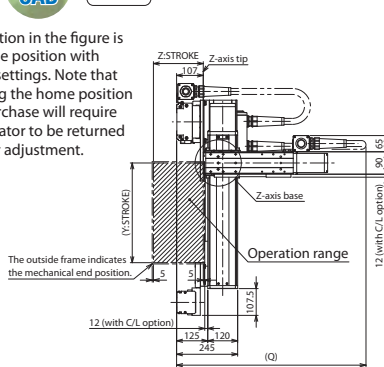
ICSB3 [ICSPB3]-GE□MS1□-SC-SC (Self-standing cable specification)

Dimensions

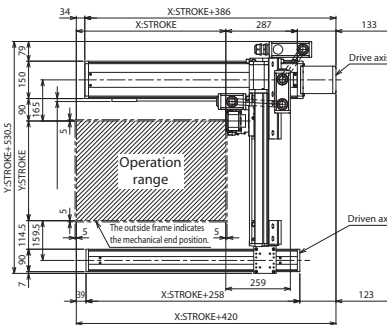
CAD drawings can be downloaded from our website.



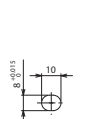
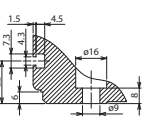
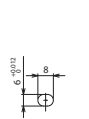
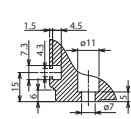
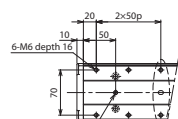
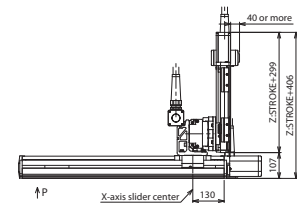
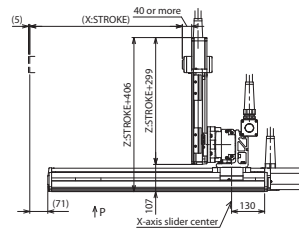
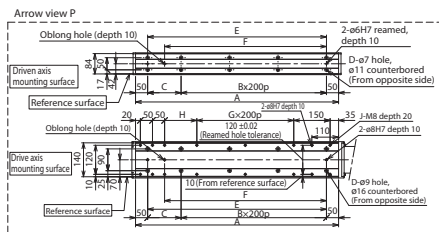
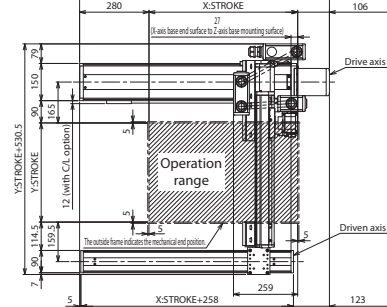
* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



(Configuration direction: 1)



(Configuration direction: 3)



Z-axis base details

Q dimension

Z-axis	Y-axis															
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
100	800	800	850	850	900	900	950	950	950	1000	1000	1050	1050	1050	1050	1050
150	850	850	900	900	950	950	1000	1000	1000	1050	1050	1100	1100	1100	1100	1100
200	900	900	950	950	1000	1000	1050	1050	1050	1100	1100	1150	1150	1150	1150	1150
250	950	950	1000	1000	1050	1050	1100	1100	1100	1150	1150	1200	1200	1200	1200	1200
300	1000	1000	1050	1050	1100	1100	1150	1150	1150	1200	1200	1250	1250	1250	1250	1250
350	1050	1050	1100	1100	1150	1150	1200	1200	1200	1250	1250	1300	1300	1300	1300	1300
400	1100	1100	1150	1150	1200	1200	1250	1250	1250	1300	1300	1350	1350	1350	1350	1350

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368
G	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983	1033	1083	1133	1183	1233
J	10	10	10	10	10	10	12	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20

ICSB3-GE□MS3L

ICSPB3-GE□MS3L High-Precision Specification



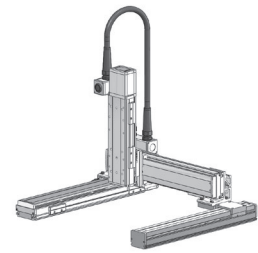
Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

Medium Speed Type

X: Lg (200W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series: ICSB3: Standard 3-axis specification, ICSPB3: High precision 3-axis specification

Type: Refer to Model Specification table below

Encoder Type: WA: Battery-less Absolute

X-axis Stroke/Option: 10: 100mm, 100: 1000mm (Every 50mm)

Y-axis Stroke/Option: 30: 300mm, 90: 900mm (Every 50mm)

Z-axis Stroke/Option: 10: 100mm, 40: 400mm (Every 50mm)

Applicable Controllers: T2: SCON, XSEL-P/Q, XSEL-RA/SA* (*Coming soon)

Cable Length: 3L: 3m, 5L: 5m, □L: Specified length

Y-axis - Z-axis Cable Management: Refer to Explanation of Model Designations below

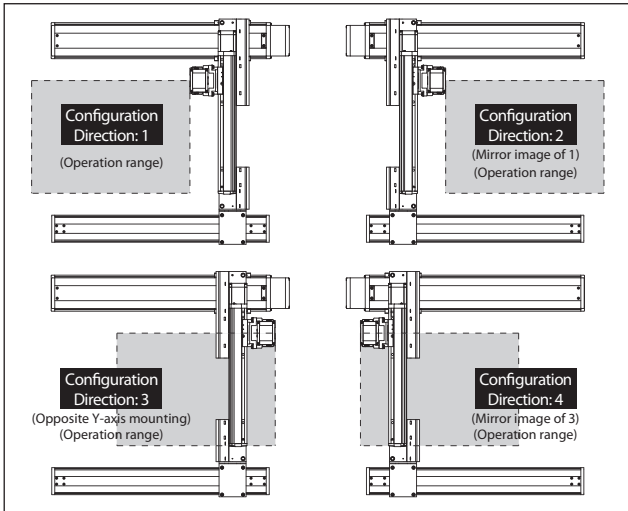
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type	Model
1	L	ICSB3[ICSPB3]-GE1MS3L-①-②③④⑤⑥⑦-T2-⑧-⑨
2	L	ICSB3[ICSPB3]-GE2MS3L-①-②③④⑤⑥⑦-T2-⑧-⑨
3	L	ICSB3[ICSPB3]-GE3MS3L-①-②③④⑤⑥⑦-T2-⑧-⑨
4	L	ICSB3[ICSPB3]-GE4MS3L-①-②③④⑤⑥⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXM-①-200-10-②-T2-⑩-③	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM03-N-0-0-②	—
Y-axis	ISB[ISPB]-MXM-①-200-10-④-T2-⑩-⑤	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-①-200-5-⑥-T2-⑩-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for ① through ⑦ in the above model names.

Note that the strokes are indicated in mm (millimeters).

* Cable exit direction is specified with ⑧ in the above model names. Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	WA: Battery-less Absolute
②	X-axis stroke (Note 1)	10: 100mm ? : 100: 1000mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	30: 300mm ? : 90: 900mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm ? : 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	SC-SC: Self-standing cable - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.

Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM).

To set the Z-axis descent position as home, remove the non-motor end (NM) designation.

Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.

Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	200W/10mm
Y-axis motor output/lead	200W/10mm
Z-axis motor output/lead	200W/5mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).

(Note 2) The cable length is the length between the X-axis connector box and the controller.

The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 15m.

(Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.

(Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GE□MS3L

Z-axis stroke	Y-axis stroke												
	300	350	400	450	500	550	600	650	700	750	800	850	900
100	34.3	34.3	34.3	34.3	34.3	34.3	33.1	29.7	26.7	23.9	21.4	19.0	16.9
150	33.6	33.6	33.6	33.6	33.6	33.6	32.4	29.0	26.0	23.2	20.7	18.3	16.2
200	33.0	33.0	33.0	33.0	33.0	33.0	31.8	28.4	25.4	22.6	20.1	17.7	15.6
250	32.3	32.3	32.3	32.1	31.8	31.4	31.0	27.7	24.7	21.9	19.4	17.0	14.9
300	30.1	29.8	29.5	29.1	28.8	28.4	28.1	27.1	24.1	21.3	18.8	16.4	14.3
350	27.5	27.2	26.9	26.5	26.2	25.9	25.6	25.3	23.5	20.7	18.2	15.8	13.7
400	25.2	24.9	24.7	24.3	24.1	23.7	23.5	23.2	22.9	20.1	17.6	15.2	13.1

Maximum Speed by Stroke (mm/s) (Note 4)

GE□MS3L

	100~300	300~400	450~700	750~800	850~900	950~1000
X-axis		600			460	380
Y-axis	—	600	430		345	—
Z-axis	300			—		

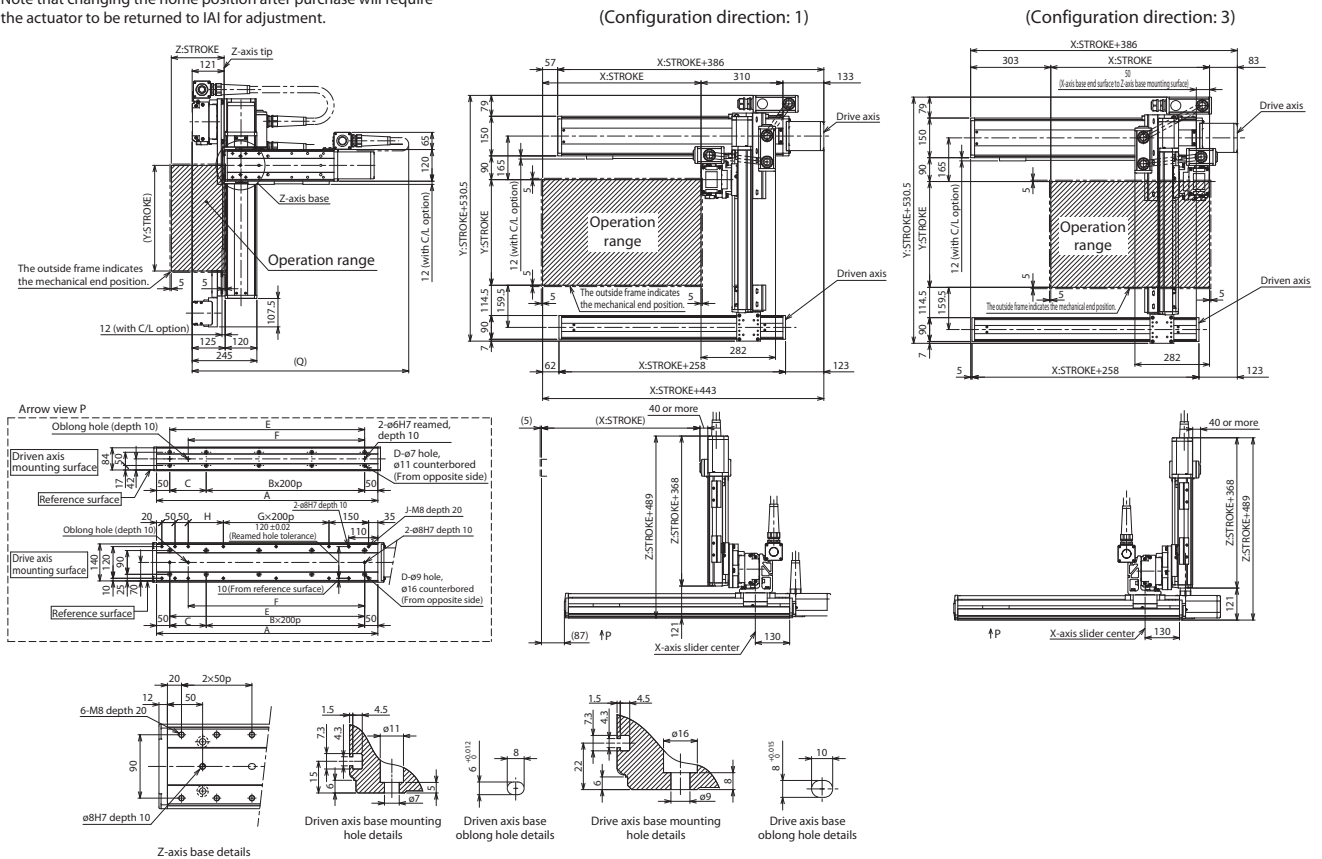
ICSB3 [ICSPB3]-GE□MS3L-SC-SC (Self-standing cable specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100		850	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1150
150		900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200
200		950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250
250		1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300
300		1050	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1350
350		1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400
400		1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450

X-axis stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238
B	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
C	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
D	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14
E	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138
F	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068
G	0	0	0	0	0	0	0	1	1	1	1	2	2	2	3	3	3	3	4
H	33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933
J	10	10	10	10	10	10	12	12	12	12	12	14	14	14	14	16	16	16	18

ICSB3-GF□HS1□

ICSPB3-GF□HS1□

High-Precision Specification



Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (60W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON SSEL XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

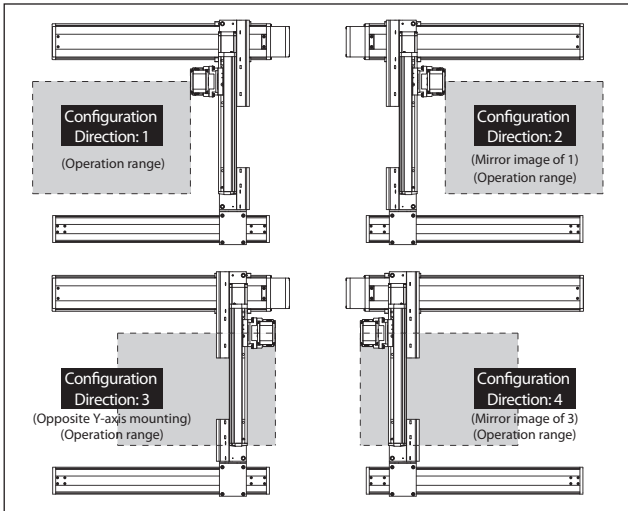
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GF1HS1M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
	L	ICSB3[ICSPB3]-GF1HS1L- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
2	M	ICSB3[ICSPB3]-GF2HS1M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
	L	ICSB3[ICSPB3]-GF2HS1L- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
3	M	ICSB3[ICSPB3]-GF3HS1M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
	L	ICSB3[ICSPB3]-GF3HS1L- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
4	M	ICSB3[ICSPB3]-GF4HS1M- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>
	L	ICSB3[ICSPB3]-GF4HS1L- <u>1</u> - <u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>6</u> <u>7</u> -T2- <u>8</u> <u>9</u>

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXMX- <u>1</u> -400-20- <u>2</u> -T2- <u>1</u> <u>3</u>	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0- <u>2</u>	—
Y-axis	ISB[ISPB]-MXM- <u>1</u> -200-20- <u>2</u> -T2- <u>1</u> <u>3</u>	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-SXM- <u>1</u> -60- <u>6</u> <u>9</u> <u>6</u> -T2- <u>1</u> <u>7</u>	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [9] in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with [6] in the above model names.
8: For Z-axis Medium Speed type
4: For Z-axis Low Speed type
* Cable exit direction is specified with [1] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation.
Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.
*4 To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	60W/8mm (M), 4mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 4, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HS1M

Z-axis stroke	Y-axis stroke	
	300~900	300~900
100	4.3	
150	3.9	
200	3.5	
250	3.1	
300	2.8	
350	2.4	
400	2.1	

GF□HS1L

Z-axis stroke	Y-axis stroke	
	300~900	300~900
100	11.3	
150	10.9	
200	10.5	
250	10.1	
300	9.8	
350	9.4	
400	9.1	

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HS1M

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		480	1200	860	695														
Z-axis																			

GF□HS1L

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
X-axis						1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340
Y-axis		240	1200	860	695														
Z-axis																			

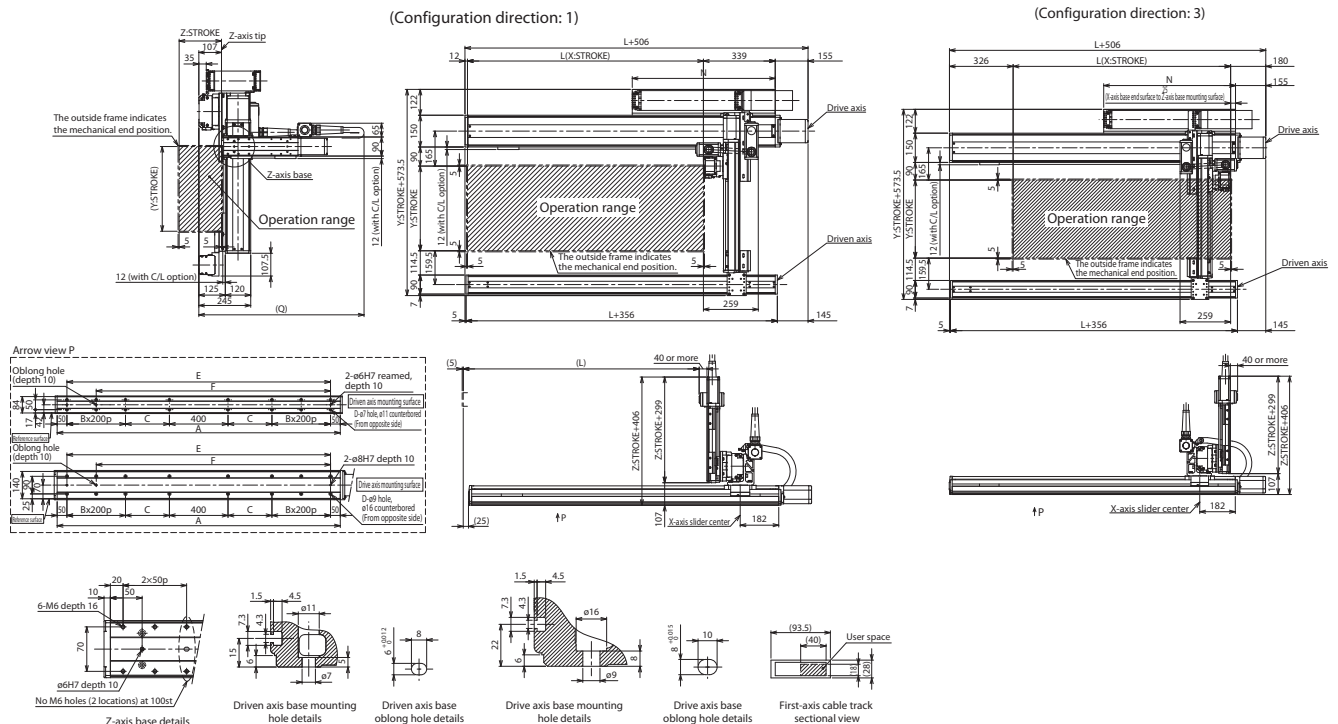
ICSB3 [ICSPB3]-GF□HS1□-CT-SC (Self-standing cable + Cable track specification)

Dimensions

CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100	800	800	850	850	900	900	900	950	950	950	1000	1000	1050	1050
150	850	850	900	900	950	950	950	1000	1000	1000	1050	1050	1100	1100
200	900	900	950	950	1000	1000	1000	1050	1050	1050	1100	1100	1150	1150
250	950	950	1000	1000	1050	1050	1050	1100	1100	1100	1150	1150	1200	1200
300	1000	1000	1050	1050	1100	1100	1100	1150	1150	1150	1200	1200	1250	1250
350	1050	1050	1100	1100	1150	1150	1150	1200	1200	1200	1250	1250	1300	1300
400	1100	1100	1150	1150	1200	1200	1200	1250	1250	1250	1300	1300	1350	1350

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2424	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSB3-GF□HS3□

ICSPB3-GF□HS3□

High-Precision Specification

±10µm
Standard

±5µm
High Precision

Battery-less Absolute

X-Y-Z 3-axis

XYBG+ZS (Y Side Gantry Z Slider)

High Speed Long Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

Series	Type	Encoder Type	X-axis Stroke/Option	Y-axis Stroke/Option	Z-axis Stroke/Option	Applicable Controllers	Cable Length	Y-axis-Z-axis Cable Management
ICSB3: Standard 3-axis specification ICSPB3: High precision 3-axis specification	Refer to Model Specification table below	WA: Battery-less Absolute	100: 1000mm 250: 2500mm (Every 100mm)	30: 300mm 90: 900mm (Every 50mm)	10: 100mm 40: 400mm (Every 50mm)	T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	3L: 3m 5L: 5m □L: Specified length	Refer to Explanation of Model Designations below

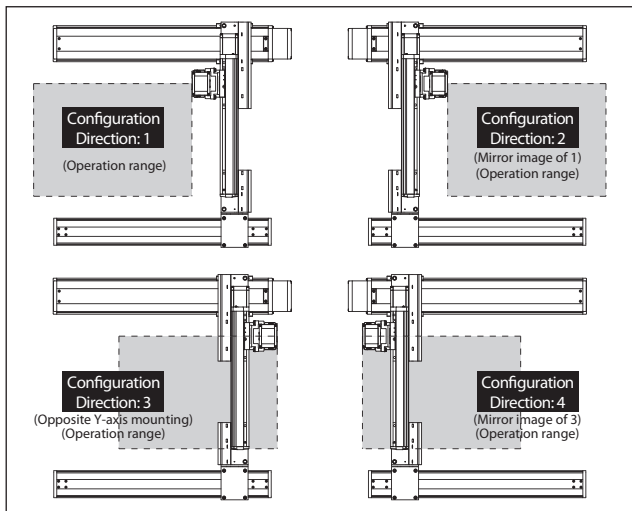
Model Specification

* Items in brackets [] are for the High-Precision Specification.

XY configuration direction *1	Z-axis speed type *2	Model
1	M	ICSB3[ICSPB3]-GF1HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF1HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
2	M	ICSB3[ICSPB3]-GF2HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF2HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
3	M	ICSB3[ICSPB3]-GF3HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF3HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
4	M	ICSB3[ICSPB3]-GF4HS3M-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]
	L	ICSB3[ICSPB3]-GF4HS3L-[1]-[2]-[3]-[4]-[5]-[6]-[7]-T2-[8]-[9]

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of [1] through [9] in the model names above.
*2 The payload and the max speed may vary depending on the type of Z-axis.

XY Configuration Direction



Axis Configuration

* Items in brackets [] are for the High-Precision Specification.

Name of axis	Model	Reference page
X-axis (Drive axis)	ISB[ISPB]-LXMX-[1]-400-20-[2]-T2-[1]-[3]	→ Please contact IAI for more details
X-axis (Driven axis)	ISB-SXM04-N-0-0-[2]	—
Y-axis	ISB[ISPB]-MXM-[1]-200-20-[3]-T2-[1]-[3]	→ Please contact IAI for more details
Z-axis	ISB[ISPB]-MXM-[1]-200-[4]-[5]-T2-[1]-[7]	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at the upper right for [1] through [7] in the above model names.
Note that the strokes are indicated in mm (millimeters).

* Lead is specified with [10] in the above model names.
10: For Z-axis Medium Speed type
5: For Z-axis Low Speed type

* Cable exit direction is specified with [11] in the above model names.
Please refer to P.11 for the exit directions.

Explanation of Model Designations

No.	Description	Notation
[1]	Encoder type	WA: Battery-less Absolute
[2]	X-axis stroke (Note 1)	100: 1000mm 250: 2500mm
[3]	X-axis option	Refer to Options table below.
[4]	Y-axis stroke (Note 1)	30: 300mm 90: 900mm
[5]	Y-axis option	Refer to Options table below.
[6]	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
[7]	Z-axis option	Refer to Options table below.
[8]	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
[9]	Y-axis-Z-axis Cable Management	CT-SC: Cable track - Self-standing cable

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
X-axis cable exit direction	*	See P.11, P.353
AQ seal (standard equipment)	AQ	See P.353
Brake (equipped as standard on Z-axis) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (standard Z-axis setting)	NM	See P.353
Guide with ball-retaining mechanism *4	RT	See P.354

*1 Brake option for X and/or Y axes increases the length of the motor unit(s). Please contact IAI for details.

*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

*4 Cannot be selected for High-Precision Specification.

* To set a different X-axis cable exit direction from the normal setting, indicate the cable exit direction symbol.
Please refer to P.11 for the cable exit direction of each axis.

Common Specifications

* Items in brackets [] are for the High-Precision Specification.

Drive system	Ball screw, rolled C10 [equivalent to rolled C5]
Positioning repeatability	±0.01mm [±0.005mm]
Lost motion	0.05mm [0.02mm] or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm (M), 5mm (L)

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 15m.
- (Note 3) The rated acceleration is 0.2G for Z-axis lead 5, and 0.4G for all others. The payload is based on operation at the rated acceleration. When the acceleration is increased, the payload will be reduced.
- (Note 4) Please note that a longer stroke will result in a lower max speed.

Payload (kg) (Note 3)

GF□HS3M

Z-axis stroke	Y-axis stroke	
	300~900	
100	14.3	
150	13.6	
200	13.0	
250	12.3	
300	11.7	
350	11.1	
400	10.5	

GF□HS3L

Z-axis stroke	Y-axis stroke															
	300	350	400	450	500	550	600	650	700	750	800	850	900			
100	32.9	32.9	32.9	32.8	32.8	32.8	32.8	29.7	26.7	23.9	21.4	19.0	16.9			
150	32.3	32.2	32.2	32.2	32.2	32.2	32.1	29.0	26.0	23.2	20.7	18.3	16.2			
200	31.7	31.7	31.7	31.7	31.5	31.1	30.7	28.4	25.4	22.6	20.1	17.7	15.6			
250	29.7	29.4	29.0	28.7	28.3	27.9	27.6	27.3	24.7	21.9	19.4	17.0	14.9			
300	27.0	26.7	26.4	26.0	25.7	25.4	25.1	24.8	24.1	21.3	18.8	16.4	14.3			
350	24.7	24.4	24.1	23.8	23.5	23.2	22.9	22.6	22.3	20.7	18.2	15.8	13.7			
400	22.6	22.4	22.1	21.8	21.5	21.2	21.0	20.7	20.4	20.1	17.6	15.2	13.1			

Maximum Speed by Stroke (mm/s) (Note 4)

GF□HS3M

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—					1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340	
Y-axis	—					1200	—													
Z-axis	600					—														

GF□HS3L

	100~300	300~400	450~700	750~800	850~900	1,000~1,200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	
X-axis	—					1200	1150	1000	950	830	740	650	590	540	490	440	410	370	340	
Y-axis	—					1200	—													
Z-axis	300					—														

ICSB3 [ICSPB3]-GF□HS3□-CT-SC (Cable track - Self-standing cable specification)

Dimensions

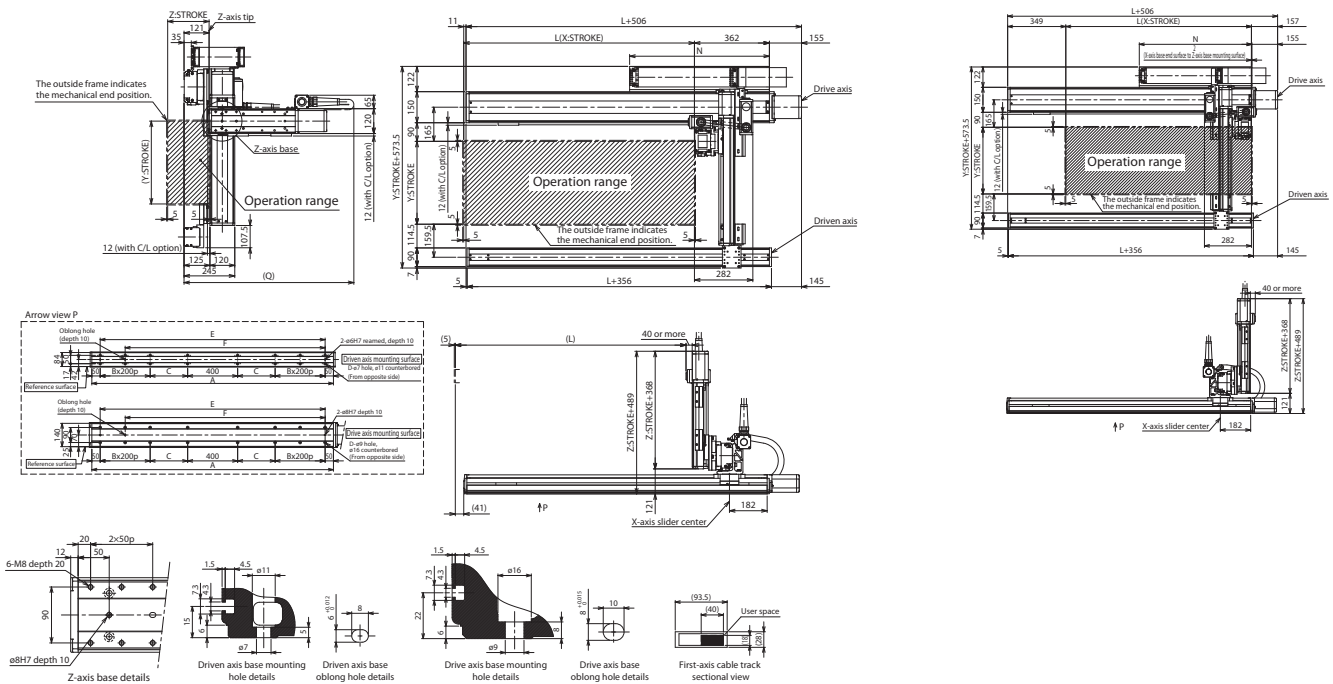
CAD drawings can be downloaded from our website.



* The position in the figure is the home position with normal settings. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

(Configuration direction: 1)

(Configuration direction: 3)



Q dimension

Z-axis	Y-axis	300	350	400	450	500	550	600	650	700	750	800	850	900
100	850	900	900	900	950	950	1000	1000	1050	1050	1100	1100	1150	1150
150	900	950	950	950	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200
200	950	1000	1000	1000	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250
250	1000	1050	1050	1050	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300
300	1050	1100	1100	1100	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350
350	1100	1150	1150	1150	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400
400	1150	1200	1200	1200	1250	1250	1300	1300	1350	1350	1400	1400	1450	1450

X-axis stroke	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
L	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2424	2514
A	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750	2850
B	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3
C	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
D	12	12	12	12	12	12	12	12	16	16	16	16	20	20	20	20
E	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550	2650	2750
F	1050	1150	1250	1350	1450	1550	1650	1750	1850	1950	2050	2150	2250	2350	2450	2550
N	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375

ICSPA4-B3N1H

High-Precision Specification

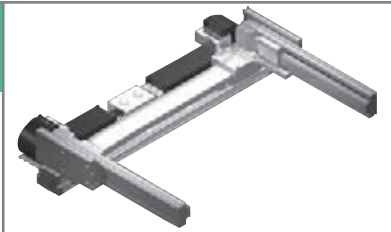


XY+XY 4-axis (NS+ISPA)

XMYB (X Multi-Slider Y Base Mount)

High Speed Type

X:Lg (400W) Y:Md (200W)



Model Specification Items

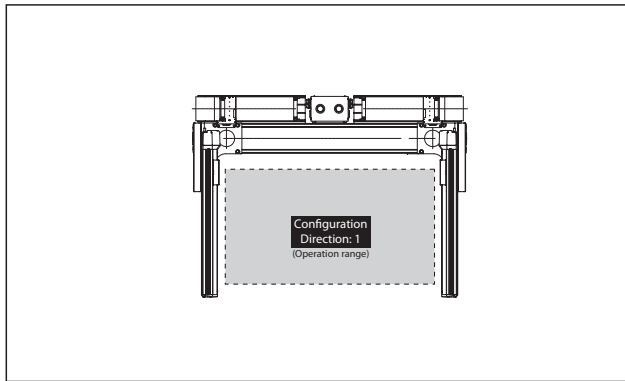
Series ICSPA4: High precision 4-axis (2-axis + 2-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Refer to Options table below.	Y1/Y2-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Refer to Options table below.	Applicable Controllers T2: SCQN XSEL-P/Q XSEL-RA/SA* * Coming soon	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--	---	--	--	--------------------------------------	--	--------------------------------------	---	---	---

Model Specification

XY configuration direction *1	Model
1	ICSPA4-B3N1H-①-②-③-④-⑤-T2-⑥-⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-40-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-④-200-20-⑤-T2-⑥	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-④-200-20-⑤-T2-⑥	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑦ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Maximum Speed by Stroke (mm/s)

	200	250	300	400	500	600	700	800~2250	
X-axis	—	2400							
Y1-axis, Y2-axis	1200							—	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	21.2	20.3	19.4	18.4	17.5	16.6
	0.4	12.2	11.3	10.4	9.4	8.5	7.6
	0.5	7.7	6.8	5.9	4.9	4.0	3.1
	0.6	3.2	2.3	1.4	—	—	—
	0.7	—	—	—	—	—	—
	0.8	—	—	—	—	—	—
	0.9	—	—	—	—	—	—
1.0	—	—	—	—	—	—	

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track

* The above shows details of ③ through ⑦ for the model names on the left.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.353
Brake (Y-axis only) *1	B	See P.353
Creep sensor *2	C	See P.353
Home limit switch *2	L	See P.353
Non-motor end specification (Y-axis only)	NM	See P.353
Guide with ball-retaining mechanism	RT	See P.354

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

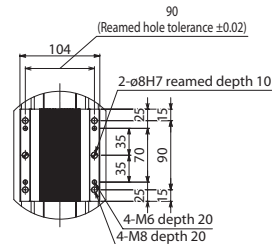
ICSPA4-B3N1H-CT (Cable track specification)

Dimensions

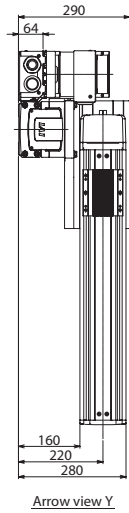
CAD drawings can be downloaded from our website.



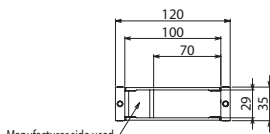
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



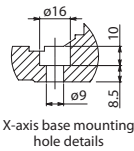
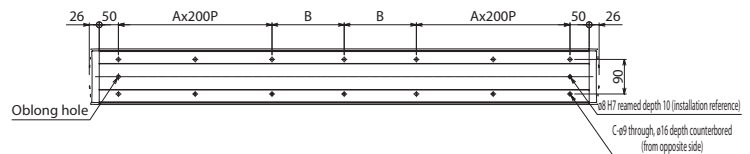
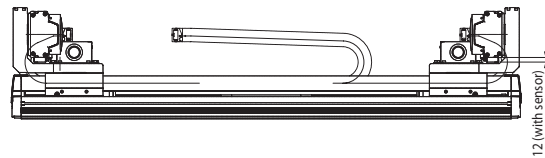
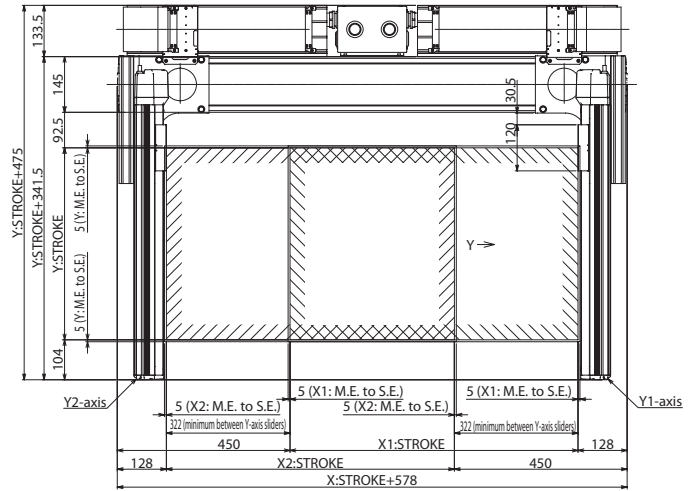
Y-axis slider details



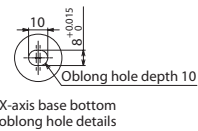
Arrow view Y



Cable track sectional view



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163	188	213
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA4-B3N1M

High-Precision Specification

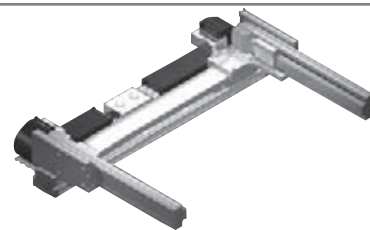


XY+XY 4-axis (NS+ISPA)

XMYB (X Multi-Slider Y Base Mount)

Medium Speed Type

X:Lg (400W) Y:Md (200W)



Model Specification Items

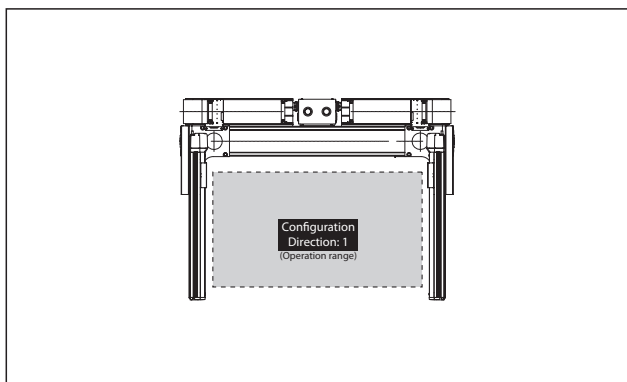
Series ICSPA4: High precision 4-axis (2-axis + 2-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Refer to Options table below.	Y1/Y2-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Refer to Options table below.	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA* * Coming soon	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis Cable Management CT: Cable Track
--	---	--	--	--------------------------------------	--	--------------------------------------	---	---	---

Model Specification

XY configuration direction *1	Model
1	ICSPA4-B3N1M-①②③④⑤-T2-⑥⑦

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑦ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-20-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-④-200-20-⑤-T2-⑥	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-⑦-200-20-⑧-T2-⑨	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Maximum Speed by Stroke (mm/s)

	200	250	300	400	500	600	700	800~2250	
X-axis	—	1300							
Y1-axis, Y2-axis	1200							—	—

Payload by Acceleration/Deceleration (kg) (Note 3)

		Y-axis stroke					
		200	300	400	500	600	700
Acceleration	0.3	40.0	40.0	33.0	27.3	22.9	19.3
	0.4	30.0	30.0	30.0	27.3	22.9	19.3
	0.5	21.6	21.6	21.6	21.6	21.6	19.3
	0.6	18.0	18.0	18.0	18.0	17.5	16.6
	0.7	15.3	14.9	14.0	13.0	12.1	11.2
	0.8	12.2	11.3	10.4	9.4	8.5	7.6
	0.9	9.5	8.6	7.7	6.7	5.8	4.9
	1.0	6.8	5.9	5.0	—	—	—

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm ? : 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm ? : 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑦	Y-axis Cable Management	CT: Cable track

* The above shows details of ③ through ⑦ for the model names on the left.

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.353
Brake (Y-axis only) *1	B	See P.353
Creep sensor *2	C	See P.353
Home limit switch *2	L	See P.353
Non-motor end specification (Y-axis only)	NM	See P.353
Guide with ball-retaining mechanism	RT	See P.354

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01 mm
Lost motion	0.02 mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

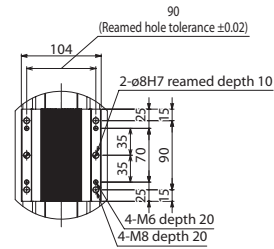
ICSPA4-B3N1M-CT (Cable track specification)

Dimensions

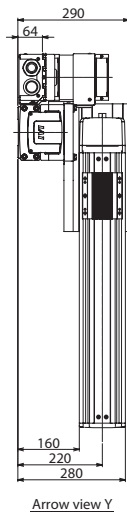
CAD drawings can be downloaded from our website.



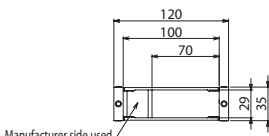
* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



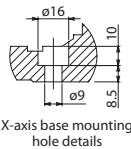
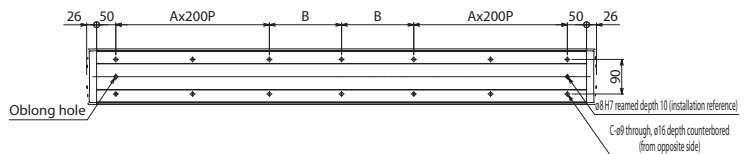
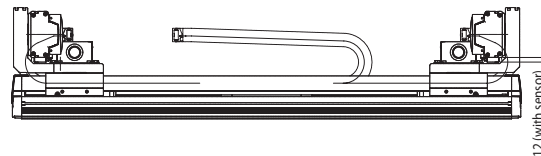
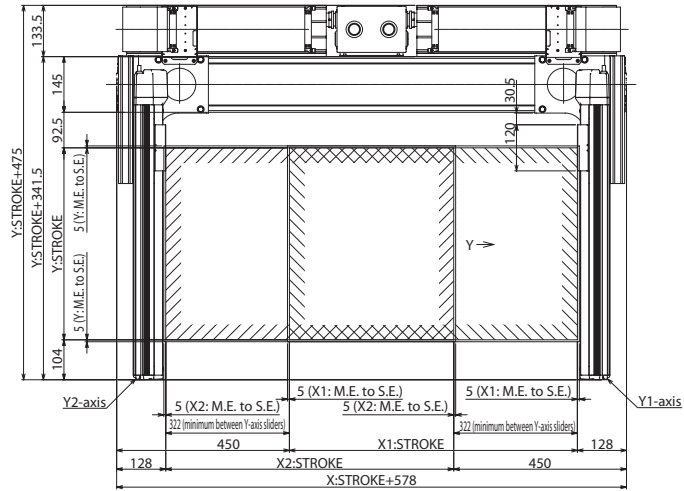
Y-axis slider details



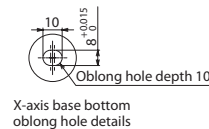
Arrow view Y



Cable track sectional view



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163	188	213
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B3N1HB3

High-Precision Specification

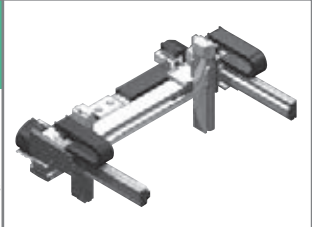


XYZ+XYZ 6-axis (NS+ISPA)

XMYB+ZB (X: Multi-Slider Y: Side Base Z: Base Mount)

High Speed Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

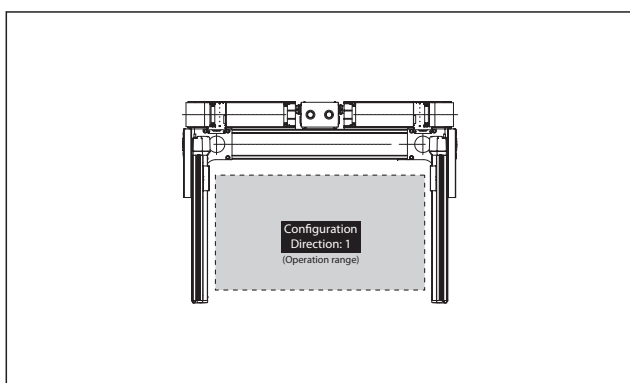
Series ICSPA6: High precision 6-axis (3-axis + 3-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z1/Z2-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
--	---	--	--	--	--	--	---	--

Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA6-B3N1HB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA6-B3N1HB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max speed may vary depending on the type of Z-axis.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-40-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MXM-①-200-⑥-⑤-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MXM-①-200-⑥-⑤-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑤ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipment option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.353
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification (Y/Z-axis only)	NM	See P.353
Guide with ball-retaining mechanism	RT	See P.354

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1HB3H

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	9.0					
	~200	9.0		8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

■B3N1HB3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.2	10.2	9.2	8.2	7.2	6.2
	~200	10.2	9.3	8.3	7.2	6.2	5.2
	~300	9.0	8.3	7.3	6.2	5.2	4.2
	~400	8.2	7.3	6.3	5.2	4.2	3.2
	~500	7.1	6.2	5.2	4.1	3.1	2.1

Maximum Speed by Stroke (mm/s)

■B3N1HB3H

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	2400							—
Y-axis	—	1200						—	—	
Z-axis	1200			—	—	—	—	—		

■B3N1HB3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	2400							—
Y-axis	—	1200						—	—	
Z-axis	600			—	—	—	—	—		

ICSPA6-B3N1HB3□-CT-CT (Cable track specification)

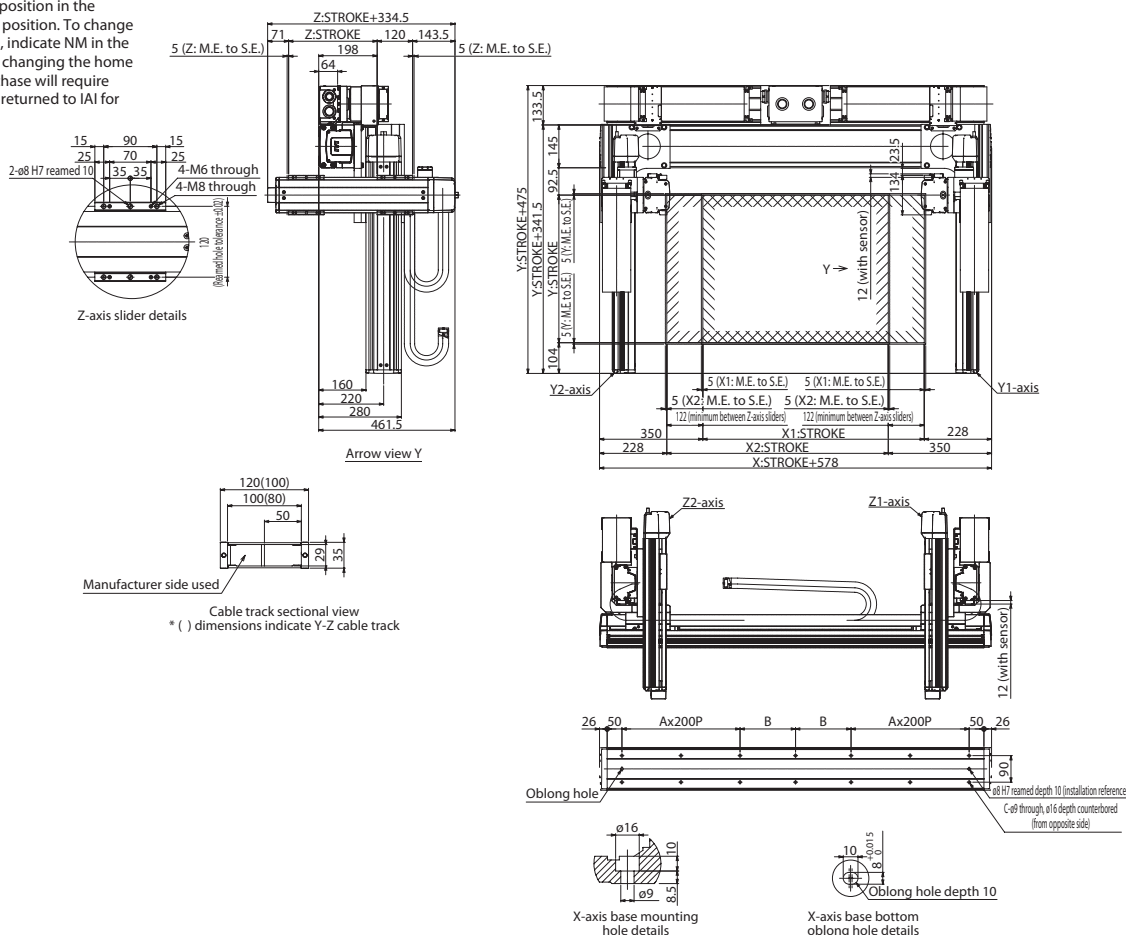
Dimensions

CAD drawings can be downloaded from our website.

M.E: Mechanical end
S.E: Stroke end



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B3N1MB3

High-Precision Specification

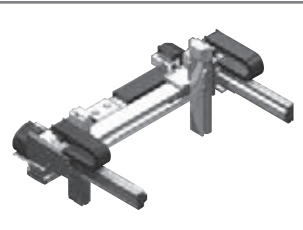


XYZ+XYZ
6-axis
(NS+ISPA)

XMYB+ZB
(X: Multi-Slider
Y: Side Base
Z: Base Mount)

Medium
Speed
Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

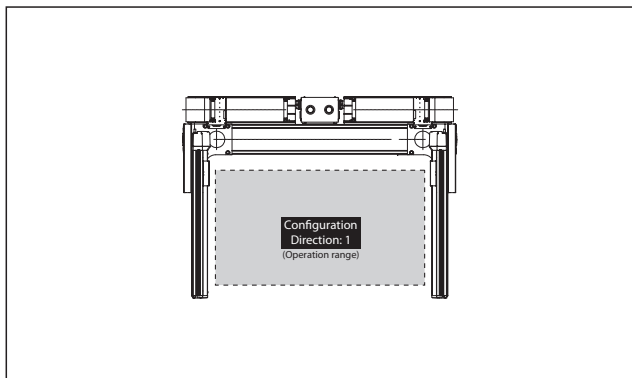
Series ICSPA6: High precision 6-axis (3-axis + 3-axis) specification	Type Refer to Model Specification table below	Encoder Type A: Absolute I: Incremental	X-axis Stroke/Option 25: 250mm 225: 2250mm (Every 50mm)	Y-axis Stroke/Option 20: 200mm 70: 700mm (Every 50mm)	Z1/Z2-axis Stroke/Option 10: 100mm 50: 500mm (Every 50mm)	Applicable Controllers T2: SCON XSEL-P/Q XSEL-RA/SA* *Coming soon	Cable Length 3L: 3m 5L: 5m □L: Specified length	Y-axis - Z-axis Cable Management Explanation of Model Designations below
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Model Specification

XY configuration direction *1	Z-axis speed type *2	Model
1	H	ICSPA6-B3N1MB3H-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨
	M	ICSPA6-B3N1MB3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
*2 The payload and the max speed may vary depending on the type of Z-axis.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-20-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-②-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MXM-①-200-⑩-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
* Lead is specified with ⑩ in the above model names.
20: For Z-axis High Speed type
10: For Z-axis Medium Speed type
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 50: 500mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.353
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification (Y/Z-axis only)	NM	See P.353
Guide with ball-retaining mechanism	RT	See P.354

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/20mm <H>, 10mm <M>

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

- (Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
- (Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
- (Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1MB3H

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100						8.9
	~ 200						7.9
	~ 300						6.9
	~ 400						5.9
	~ 500						4.8

■B3N1MB3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	19.0		17.0		12.6	8.9
	~ 200	19.0		16.1		11.6	7.9
	~ 300	19.0		15.1		10.6	6.9
	~ 400	19.0		14.1		9.6	5.9
	~ 500	19.0		18.8	13.0	8.5	4.8

Maximum Speed by Stroke (mm/s)

■B3N1MB3H

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	1300							—
Y-axis	—	1200						—	—	
Z-axis	1200			—	—	—	—	—		

■B3N1MB3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	1300							—
Y-axis	—	1200						—	—	
Z-axis	600			—	—	—	—	—		

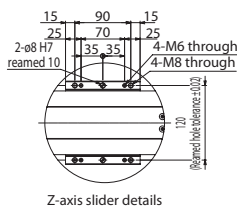
ICSPA6-B3N1MB3□-CT-CT (Cable track specification)

Dimensions

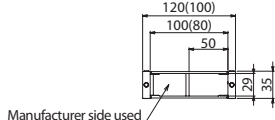
CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

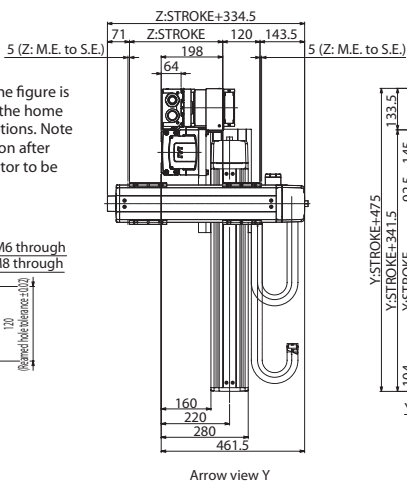


Z-axis slider details

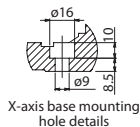
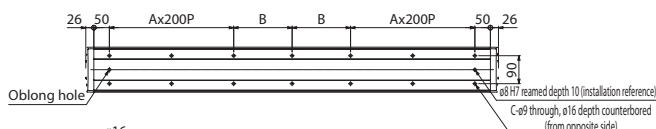
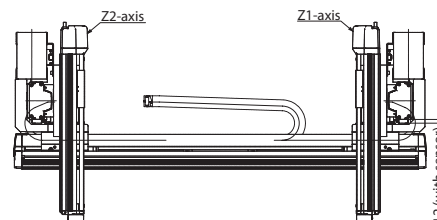
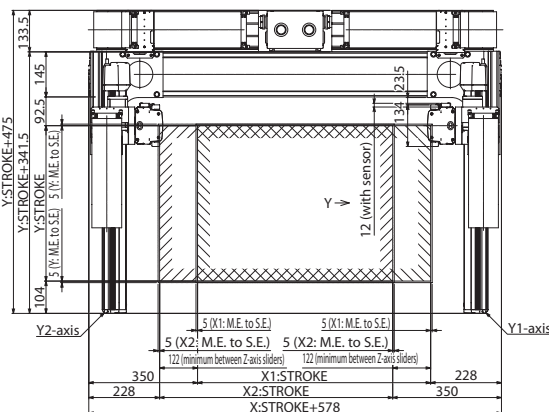


Cable track sectional view
* () dimensions indicate Y-Z cable track

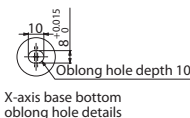
M.E: Mechanical end
S.E: Stroke end



Arrow view Y



X-axis base mounting hole details



X-axis base bottom oblong hole details

X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B3N1HS3M High-Precision Specification

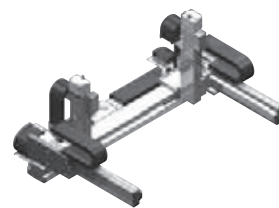


XYZ+XYZ
6-axis
(NS+ISPA)

XMYB+ZS
(Multi-Slider
Y-Side-Base Mount
Z-Slide)

High
Speed
Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

ICSPA6—B3N1HS3M

Series
ICSPA6: High precision 6-axis (3-axis + 3-axis) specification

Type
Refer to Model Specification table below

Encoder Type
A: Absolute
I: Incremental

X-axis Stroke/Option
25: 250mm
225: 2250mm (Every 50mm)

Y-axis Stroke/Option
20: 200mm
70: 700mm (Every 50mm)

Z1/Z2-axis Stroke/Option
10: 100mm
40: 400mm (Every 50mm)

Applicable Controllers
T2: SCON
XSEL-P/Q
XSEL-RA/SA*
*Coming soon

Cable Length
3L: 3m
5L: 5m
□L: Specified length

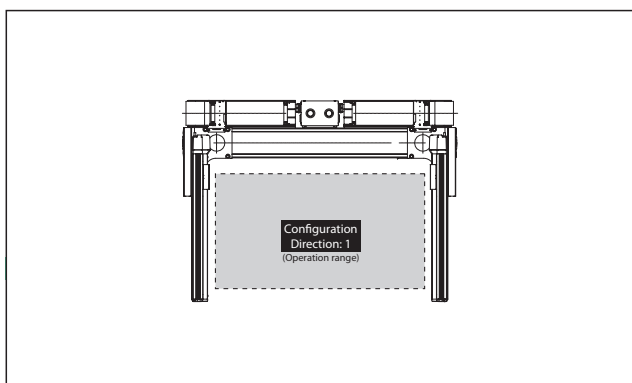
Y-axis - Z-axis Cable Management
Explanation of Model Designations below

Model Specification

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSPA6-B3N1HS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction.
Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-40-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis.
Make sure to indicate the standard equipped option in the model number.
When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.353
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification *3 (Y/Z-axis only (standard Z-axis setting))	NM	See P.353
Guide with ball-retaining mechanism	RT	See P.354

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position. Please refer to P.11 for more information.
*3 The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/40mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.



Notes

(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
(Note 2) The cable length is the length between the X-axis connector box and the controller.
The standard lengths are 3m and 5m, but other lengths can also be specified in meters.
The maximum length is 20m.
(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1HS3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100	11.5	10.5	9.5	8.4	7.5	6.5
	~200	10.5	9.5	8.5	7.4	6.5	5.5
	~300	9.5	8.5	7.5	6.4	5.5	4.5
	~400	8.4	7.4	6.5	5.4	4.4	3.4

Maximum Speed by Stroke (mm/s)

■B3N1HS3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	2400							—
Y-axis	—	1200							—	—
Z-axis	600			—	—	—	—	—	—	

ICSPA6-B3N1HS3M-CT-CT (Cable track specification)

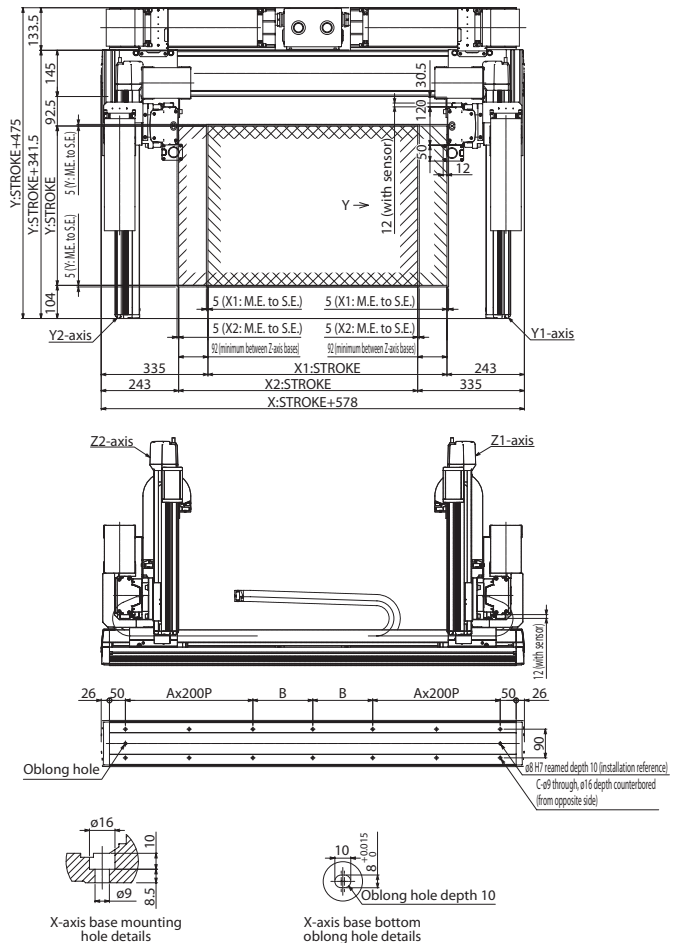
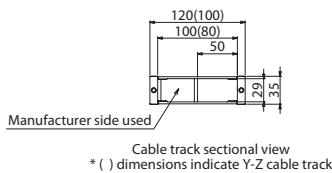
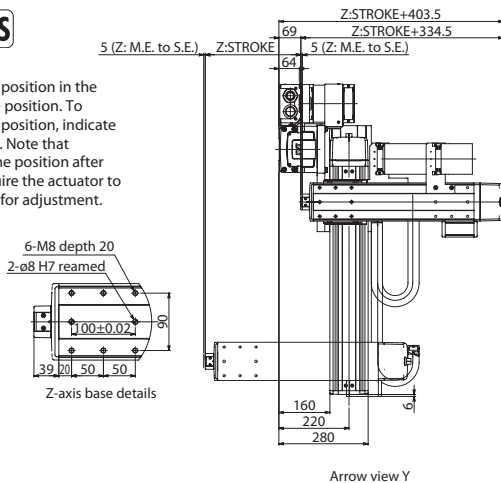
Dimensions

CAD drawings can be downloaded from our website.

M.E: Mechanical end
S.E: Stroke end



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IA for adjustment.



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3
B	138	163	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	18	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	338	363	388	413	438	463	488	513	538	563	588	613	638	663	688	713	738
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

ICSPA6-B3N1MS3M High-Precision Specification

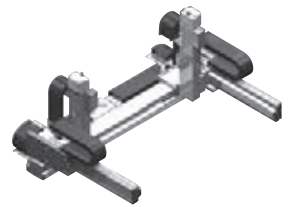


XYZ+XYZ
6-axis
(NS+ISPA)

XMYB+ZS
4 Multi-Slider
Y-Side-Base Mount
Z-Slide

Medium
Speed
Type

X: Lg (400W)
Y: Md (200W)
Z: Md (200W)



Model Specification Items

ICSPA6-B3N1MS3M

Series
ICSPA6: High precision 6-axis (3-axis + 3-axis) specification

Type
Refer to Model Specification table below

Encoder Type
A: Absolute
I: Incremental

X-axis Stroke/Option
25: 250mm
225: 2250mm (Every 50mm)

Y-axis Stroke/Option
20: 200mm
70: 700mm (Every 50mm)

Z1/Z2-axis Stroke/Option
10: 100mm
40: 400mm (Every 50mm)

Applicable Controllers
T2: SCON
XSEL-P/Q
XSEL-RA/SA*

Cable Length
3L: 3m
5L: 5m
□L: Specified length

Y-axis - Z-axis Cable Management
Explanation of Model Designations below

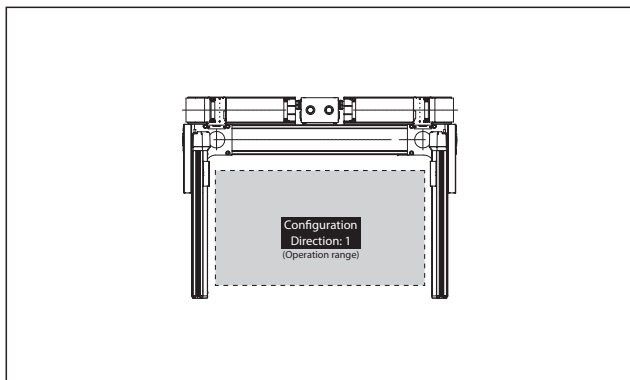
*Coming soon

Model Specification

XY configuration direction *1	Z-axis speed type	Model
1	M	ICSPA6-B3N1MS3M-①-②-③-④-⑤-⑥-⑦-T2-⑧-⑨

*1 Please refer to the following diagram under XY Configuration Direction. Please refer to the table on the right for details of ① through ⑨ in the model names above.

XY Configuration Direction



Axis Configuration

Axis configuration	Model	Reference page
X-axis	NS-LXMM-①-400-20-②-T2-③-NT1	→ Please contact IAI for more details
Y1-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Y2-axis	ISPA-MYM-①-200-20-④-T2-⑤	→ Please contact IAI for more details
Z1-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details
Z2-axis	ISPA-MZM-①-200-10-⑥-T2-⑦	→ Please contact IAI for more details

* Refer to the symbols within the table Explanation of Model Designations at upper right for ① through ⑨ in the above model names.
Note that the strokes are indicated in mm (millimeters).
Note: Although the rotating nut types and linear servo types are equipped with cable tracks even for individual axes, a different cable track is used when it is assembled in a Cartesian system, so replacement actuators should specify the no-cable track specification (NT1).

Explanation of Model Designations

No.	Description	Notation
①	Encoder type	A: Absolute I: Incremental
②	X-axis stroke (Note 1)	25: 250mm 225: 2250mm
③	X-axis option	Refer to Options table below.
④	Y-axis stroke (Note 1)	20: 200mm 70: 700mm
⑤	Y-axis option	Refer to Options table below.
⑥	Z-axis stroke (Note 1)	10: 100mm 40: 400mm
⑦	Z-axis option	Refer to Options table below.
⑧	Cable length (Note 2)	3L: 3m 5L: 5m □L: □m
⑨	Y-axis - Z-axis Cable Management	CT-CT: Cable track

Options

The option codes should be entered after the stroke for each axis. Make sure to indicate the standard equipped option in the model number. When selecting multiple options, specify them in **alphabetical order**.

Type	Model	Reference page
AQ seal (standard equipment)	AQ	See P.353
Brake (Y/Z-axis only (equipped as standard on Z-axis)) *1	B	See P.353
Creep sensor *2	C/CL	See P.353
Home limit switch *2	L/LL	See P.353
Non-motor end specification * (Y/Z-axis only (standard Z-axis setting))	NM	See P.353
Guide with ball-retaining mechanism (equipped as standard on X-axis)	RT	See P.354

*1 Brake option for Y-axis increases the length of the non-motor side. Please contact IAI for details.
*2 When selecting the creep sensor and home limit switch, the mounting position differs according to the configuration direction, but the creep sensor is specified in the model name as "C" and the home limit switch as "L" regardless of the mounting position.
Please refer to P.11 for more information.
* The configuration position in the figure is the home position. The normal setting for Z-axis is non-motor end (NM). To set the Z-axis descent position as home, remove the non-motor end (NM) designation. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

Common Specifications

Drive system	Ball screw, equivalent to rolled C5
Positioning repeatability	±0.01mm
Lost motion	0.02mm or less
Guide	Integrated with base
Base	Material: Aluminum with white alumite treatment
X-axis motor output/lead	400W/20mm
Y-axis motor output/lead	200W/20mm
Z-axis motor output/lead	200W/10mm

Applicable Controllers

Contact IAI. The controller for this system needs to be purchased/prepared separately.

Notes	Content
⚠	(Note 1) The strokes in the model names of the Cartesian Robots are specified in cm (centimeters).
	(Note 2) The cable length is the length between the X-axis connector box and the controller. The standard lengths are 3m and 5m, but other lengths can also be specified in meters. The maximum length is 20m.
	(Note 3) The rated acceleration is 0.3G. Although it is operable up to 1G, increasing the acceleration will reduce the payload.

Payload (kg)

■B3N1MS3M

		Y-axis stroke					
		200	300	400	500	600	700
Z-axis stroke	100						9.1
	~200						8.1
	~300						7.1
	~400						6.1

Maximum Speed by Stroke (mm/s)

■B3N1MS3M

	Stroke									
	100	200	250	300	400	500	600	700	800~2250	
X-axis	—	—	1300							—
Y-axis	—	1200							—	—
Z-axis	600			—	—	—	—	—	—	

ICSPA6-B3N1MS3M-CT-CT (Cable track specification)

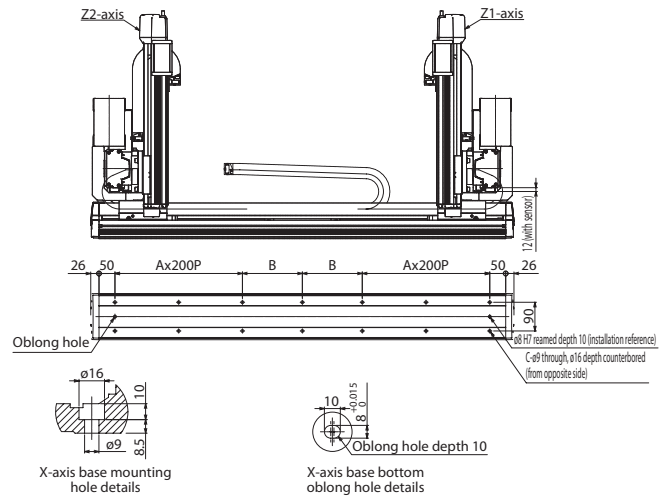
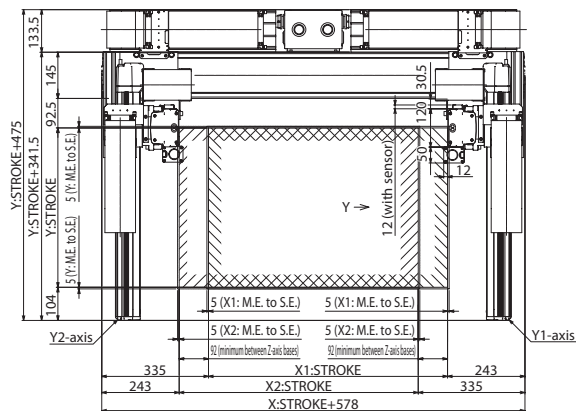
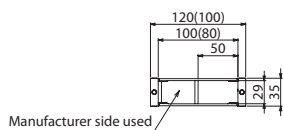
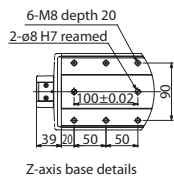
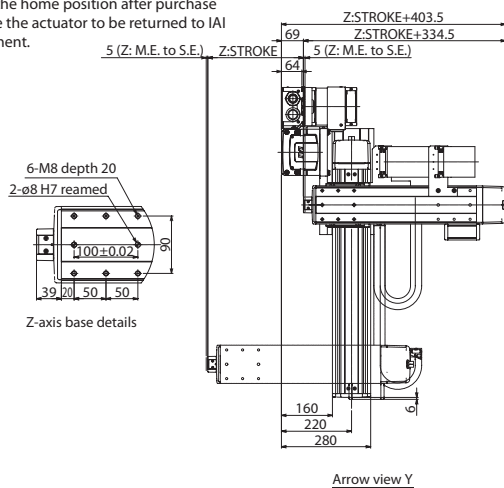
Dimensions

CAD drawings can be downloaded from our website.



* The configuration position in the figure is the home position. To change the home position, indicate NM in the options. Note that changing the home position after purchase will require the actuator to be returned to IAI for adjustment.

M.E: Mechanical end
S.E: Stroke end



X stroke	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3
B	138	163	188	213	238	263	288	113	138	163	188	213	238	263	288	313	138	163	188	213
C	10	10	10	10	10	10	10	14	14	14	14	14	14	14	14	14	18	18	18	18

X stroke	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250
A	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6
B	238	263	288	313	138	163	188	213	238	263	288	313	138	163	188	213	238	263	288	313	138
C	18	18	18	18	22	22	22	22	22	22	22	22	26	26	26	26	26	26	26	26	30

Cartesian Robot Options

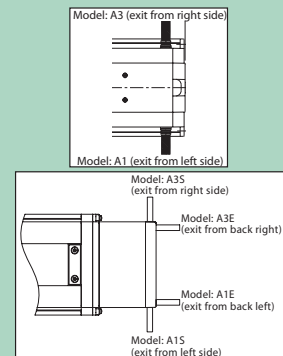
Cable exit direction

Model A1/A3

Description Specify when changing the actuator cable exit direction.

Model A1S/A1E/A3S/A3E

Description The exit direction of the actuator cable can be selected from back left, side left, back right and side right.
* It is required to select an exit direction.



AQ seal

Model AQ

Description AQ seal is a lubricant unit that uses a lubricating member made of lubricating oil solidified with resin. Because it is a porous member that contains a large amount of lubricating oil, the oil seeps out on the surface through capillary action. Lubricating oil is supplied by pressing the AQ seal on the surface of the guide and ball screw (steel ball rolling surface), enabling long-term use without maintenance in a synergistic effect by the combined use of the grease.

Brake

Model B

Description When used vertically, this works as a holding mechanism that prevents the Z-axis slider from falling and damaging any attached fittings when the power or servo is turned off. As the Z-axis is designed to be used vertically, a brake will be equipped as a standard feature. For axes other than the Z-axis, please use the brake option as required.

Creep sensor

Model C / CL

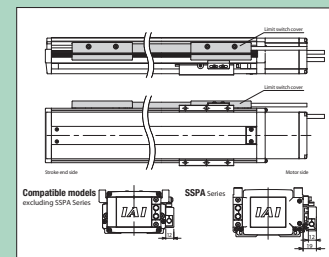
Description A sensor for performing homing at high speed. As homing is normally done by pressing the slider against the stopper on the motor side stroke end and reversing it, the homing speed is kept to 10~20mm/s. Therefore, types with long stroke take time until homing is completed. In order to shorten this, the proximity sensor is used to return the slider at high speed halfway through, then drop the speed to normal homing return speed just before home. The mounting position of the sensor is by default on the right side of the actuator body as viewed from the motor side (C) and the left side for the opposite type (CL). The mounting position of the sensor is determined by the axis configuration direction. Please refer to P.11 for more information.

Home limit switch

Model L / LL

Description When performing home return, the standard type determines the home position by pushing against the mechanical end and reversing. This option allows reverse motion to be triggered by a sensor. Use when changing or adjusting the reversing position during home return or confirming that the home position has been reached. The mounting position of the limit switch and cover is by default on the right side of the actuator body as viewed from the motor side (L) and the left side for the opposite type (LL). The mounting position of the sensor is determined by the axis configuration direction. Please refer to P.11 for more information.

* IS(S)P-W has a limit switch equipped as standard. Also, as the limit switch is built into the body, there is no cover on the body side.



Non-motor end specification

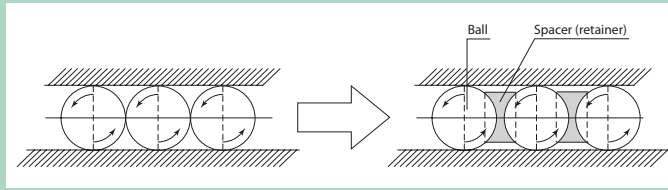
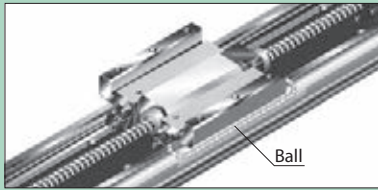
Model NM

Description The normal home position is set to the motor side, but this is the option to set the home position on the other side in order to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuators are shipped may require the products to be sent back to IAI for re-setting.)

Guide with ball-retaining mechanism

Model RT

Description A spacer (retainer) is placed between steel balls of the guide in order to reduce noise and extend the service life. It eliminates metallic noise due to balls colliding with each other, reducing harsh noise. It reduces wear caused by friction of balls, extending the life of the guide. It eliminates the interference between balls, making the movement smoother and improving the operating capability of the slider.
 * It cannot be used with ISB/ISPB-SXL/MXL/LXL or ISA/ISPA-WXM/WXMX.



Cartesian Robot Application Examples

CD-Rom Stacking Incremental Positioning

RC Line IA Line RCS2-RA4C RCS2-RA5C ICSB2 Controller X-SEL

Cutting Positioning

IA Line ICSB2 Controller S-SEL (x 1)

Pick & Place Positioning

IA Line ICSB3 (x 2) Controller X-SEL (x 2)

Circuit Board Inspection Positioning

IA Line ICSB3 Controller X-SEL

Parts Transfer Positioning

IA Line RC Line ICSB2 RCS2-A5R Controller X-SEL

Screwdriving Positioning

IA Line ICSB2 Controller S-SEL

Burr Removing & Inspection Positioning

IA Line ICSA6 Controller X-SEL

Dispensing Path Move Index Mode

RC Line IA Line RCS2-RT6R ICSB3 Controller X-SEL

Unloading Positioning

IA Line ICSB3 Controller X-SEL

**ICSB&ICSA Series
Catalogue No. 0417-E**



The information contained in this catalog is subject to change without notice for the purpose of product improvement



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